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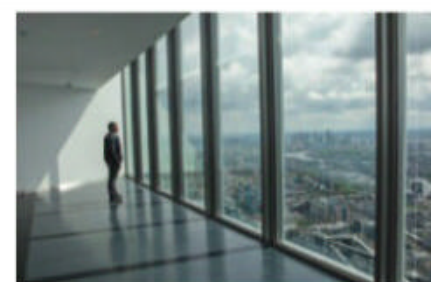
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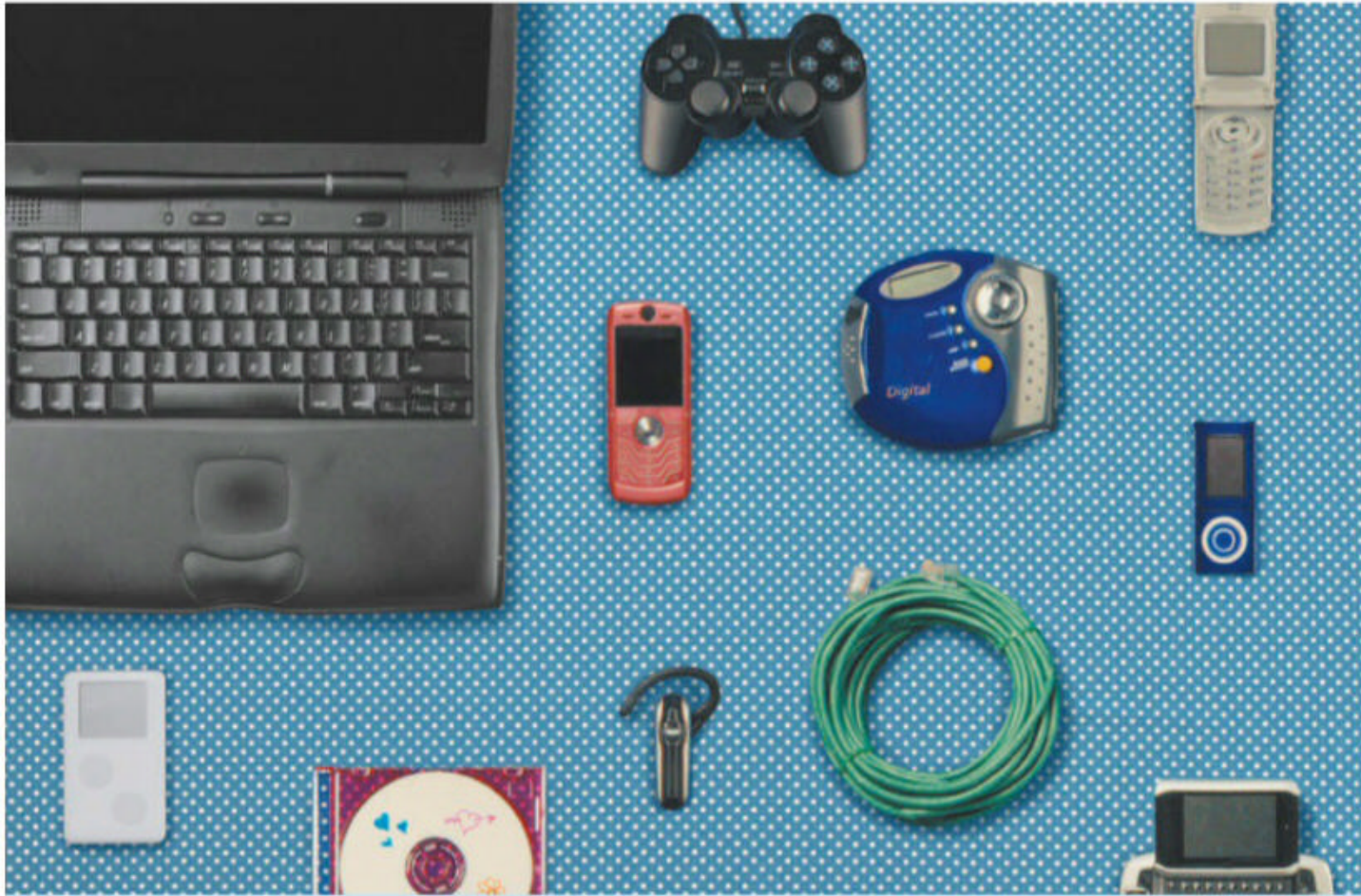
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The opponents of Binyamin Netanyahu reached an agreement that would end his 12-year stretch as prime minister of **Israel**. Under the deal, Naftali Bennett, the leader of a nationalist party, would become prime minister, serving for two years before handing over to Yair Lapid, a centrist and secularist. The Knesset still must pass a vote of confidence in the new coalition, which includes an Arab-Israeli party. That leaves time for Mr Netanyahu to try to pick off its right-wing supporters.

The African Union suspended **Mali's** membership and threatened to impose sanctions if a civilian-led government is not restored. Last month Mali's armed forces mounted a coup, the second in less than a year.

The **Democratic Republic of Congo** said that 32 of its MPs had died of covid-19. The reported total for the entire country of 80m is only 786 deaths. So either MPs are very unlucky or there is massive undercounting among less prominent folk, and a far worse pandemic than official numbers admit.

Iran's largest navy vessel (in terms of tonnage) sank after catching fire in the Gulf of Oman during a training mission. The cause of the fire was not immediately clear. The navy said it started in one of the ship's systems.

A cargo ship carrying chemicals and plastic pellets sank off the coast of **Sri Lanka**, near Colombo. The *X-Press Pearl* had been on fire for two weeks. Its sinking will exacerbate an unfolding maritime disaster:

hundreds of tonnes of fuel could escape from its tanks to add to the tonnes of plastic already finding their way onto local beaches.

China's ruling Politburo said the country's **two-children-per-couple** rule would be changed to a three-child one. The government, which once tried to force people to have fewer babies, now wants them to have more, to stop the population from ageing so fast. Parents who want a third child rejoiced, but the vast majority do not. Demographers predicted that the birth rate would not rise much.

Hishammuddin Hussein, **Malaysia's** foreign minister, said his country would summon China's ambassador, after 16 Chinese air-force planes were seen approaching Malaysia's airspace over the South China Sea, where the countries' territorial claims overlap. The foreign ministry described the incident as a "serious threat to national sovereignty". Chinese officials described the flights as "routine".

A **Chinese blogger**, Qiu Ziming, was sentenced to eight months in prison for "picking quarrels and causing trouble". His offence related to his posts suggesting that China had under-reported the number of its soldiers killed in border clashes with India last year.

Democrats staged a walk-out in the **Texas** legislature, preventing Republicans from passing a bill that would tighten the state's voting laws. Critics say the bill, which among other things bans 24-hour polling stations, is intended to suppress black and Hispanic votes. Republicans will probably get another go at passing it in a special session of the legislature.

America's Department of the Interior suspended licences to drill for oil in the **Arctic National Wildlife Refuge** in Alaska, which for decades has been a flashpoint between environmentalists and energy

firms. The licences were sold during the final days of Donald Trump's administration.

Protests in **Colombia** continued for a second month. Iván Duque, the besieged president, sent the army to Cali, the city worst affected by the violence. Human Rights Watch said that at least 63 people have been killed during the past month.

Tens of thousands of **Brazilians** took to the streets to voice their disapproval of Jair Bolsonaro's handling of the covid-19 crisis. Some waved signs demanding "Bolsonaro out". It was the first big protest against the president since the start of the pandemic. Mr Bolsonaro's approval ratings have plummeted; he is up for re-election next year.

Mr Bolsonaro agreed that covid-embattled Brazil could step in at the last minute and host the **Copa América** football tournament, which starts on June 13th. Surging infections in Argentina and protests in Colombia have caused both countries to withdraw as co-hosts. Critics fretted that cheering fans will turn the matches into superspreading events.

Russia's upper house of parliament approved a law barring members of "terrorist" and "extremist" organisations from holding elective office. Vladimir Putin's government routinely applies those labels to peaceful dissident groups, such as the supporters of Alexei Navalny, the main opposition leader, who is in prison on bogus charges.

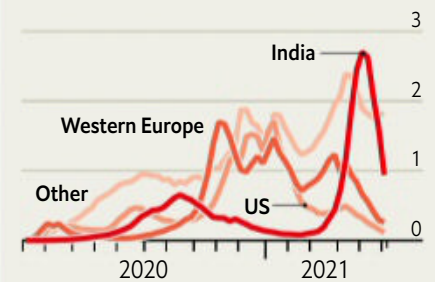
America's State Department imposed sanctions on one current and four former officials in **Bulgaria**, because of their involvement in "significant corruption".

Boris Johnson married his fiancée, Carrie Symonds, at Westminster Cathedral. The twice-divorced Mr Johnson is the first British prime minister in 200 years to tie the knot while in office.

Coronavirus briefs

To 6am GMT Jun 3rd 2021

Weekly confirmed cases by area, m



Vaccination doses

	Total '000	% of adults with	
		1st dose	2nd
UAE	12,968	99	62
Israel	10,586	98	92
Bhutan	483	95	0
Mongolia	3,183	91	65
Malta	520	89	56
Maldives	476	76	41
Britain	65,212	76	49
Chile	18,682	75	56
Canada	24,169	74	7
Bahrain	1,756	74	61

Sources: Johns Hopkins University CSSE; Our World in Data; United Nations

Peru raised its death toll from the disease to 180,000 (from 69,300) to keep the figure in line with international counting of excess deaths.

Britain reported zero daily deaths from covid-19 for the first time since the start of the pandemic in March last year. The country's vaccine roll-out has been a stellar success. More than 75% of adults have received at least one jab.

The World Health Organisation (WHO) approved the **Sinovac** vaccine for emergency use, the second jab made in China to receive its blessing.

The WHO reclassified **variants of the disease** by letters of the Greek alphabet to avoid upsetting the countries where they were first spotted. The British variant becomes Alpha, the South African variant Beta, and so on. In a somewhat less sensitive move, the WHO elected Syria, a blood-drenched dictatorship, to a seat on its executive board.

→ For our latest coverage of the virus please visit [economist.com/coronavirus](https://www.economist.com/coronavirus) or download the Economist app.

In its latest outlook the OECD forecast that the **world economy** will grow by 5.8% this year, a sharp upward revision from its previous estimate. The success of vaccine roll-outs in much of the rich world and the huge stimulus programme in the United States have helped improve global prospects. GDP per person has already returned to pre-pandemic levels in some countries, such as America and South Korea, but the OECD thinks that it will take another year for much of Europe to make up the difference, and another two to five years in Argentina, Mexico and South Africa. Real global output will still be \$3trn less by the end of 2022 than it would have been without the crisis.

Brazil's official statistics office said that the country's economy returned to pre-pandemic size in the first quarter, when GDP grew by 1.2% over the previous quarter, a faster pace than many economists were expecting. **India's** economy was also on the road to recovery in the first quarter, boosted by manufacturing and government spending, but that was before an escalation of covid-19 infections that plagued the country in April and May.

A study by the International Labour Organisation found that a further 108m **workers** and their families around the world are living on \$3.20 or less a day relative to 2019, in purchasing power parity terms, returning working-poverty rates to those of 2015. The recovery will create a net 100m jobs this year, though total employment will still fall short of its pre-crisis level.

The euro zone's annual rate of **inflation** leapt to 2% in May, passing the European Central Bank's target of "below, but close to 2%", for the first time in more than two years. In Germany it hit 2.4% (up from 1.6% at the start of the year). The ECB, along with the Federal Reserve, insists that surging prices are temporary and will eventually ease. Rising energy costs are a big factor driving

inflationary pressures. Petrol (gas) prices reached a seven-year high in America ahead of the Memorial Day holiday.

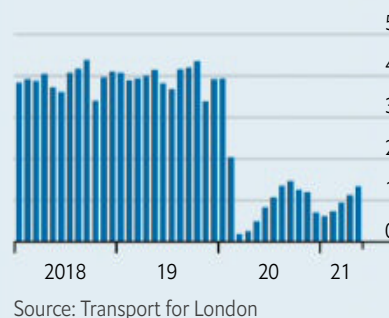
There is little sign of those prices easing in the near future. This week Brent crude closed at over \$70 a barrel for the first time in two years, after OPEC+ (which includes Russia) signalled that the demand for **oil** will increase later this year. The glut of oil that kept prices low before the pandemic has diminished enough to encourage OPEC to raise output.

Declining cases of covid-19 and the easing of restrictions made Americans more willing to travel over the Memorial Day weekend. Over 1.9m people were screened at **America's airports** on both Friday and Monday, the busiest days. That was well up from more than 300,000 on each day last year, but down from 2.5m in 2019.

A **cyber-attack** on JBS, the world's biggest meat-processor, halted its operations in America and Australia. It is the third big cyber-attack in recent weeks, following those on a pipeline in America and Ireland's health-care system. Russian criminal gangs are thought to be behind all three.

A long journey ahead

London Underground
Average daily journeys, m



Transport for London, the city's public-transport authority, received its third emergency support package from the government since the start of the pandemic. The main reason for TfL's woes is its shift away from subsidies in recent years towards a reliance on passenger income. That revenue was worth around £5bn (\$7bn) before covid-19, but has since dwindled. The government's funding conditions will lead to fare increases. But there is some light at the end of tunnel: passengers are returning, albeit hesitantly.

Britain began the long process of joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, after the 11 countries that comprise the **free-trade area** agreed on its application. Japan in particular has thrown its support

behind Britain's request in order to give the pact more heft; America withdrew from a precursor agreement during the Trump administration.

A former banker with M.M. Warburg, one of Germany's oldest private banks, was found guilty of aggravated tax evasion for his participation in the "**cum-ex**" scandal, where share transactions were conducted at high speed on or just before the day dividend payments were recorded, allowing the participants to claim duplicate tax rebates. The unnamed banker is in his 70s. His conviction will probably be the first of many; there are another 1,000 suspects.

Turkey's president, Recep Tayyip Erdogan, again put the independence of the country's central bank in doubt with a renewed call for a cut in interest rates in July or August.

Tallying the books

Lockdowns boosted sales and profit at **Bloomsbury** for the year ending February 28th. "The popularity of reading has been a ray of sunshine in an otherwise very dark year," said the publisher's chief executive, as the company again raised profit expectations for 2021.



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Geopolitics and business

America and China now dominate global business. That is a wake-up call for other countries

TWENTY YEARS ago this week the share price of a startup run by an obsessive called Jeff Bezos had slumped by 71% over 12 months. Amazon's near-death experience was part of the dot-com crash that exposed Silicon Valley's hubris and, along with the \$14bn fraud at Enron, shattered confidence in American business. China, meanwhile, was struggling to privatise its creaking state-owned firms, and there was little sign that it could create a culture of entrepreneurship. Instead the bright hope was in Europe, where a new single currency promised to catalyse a giant business-friendly integrated market.

Creative destruction often makes predictions look silly, but even by these standards the post-pandemic business world is dramatically different from what you might have expected two decades ago. Tech firms comprise a quarter of the global stock-market and the geographic mix has become strikingly lopsided (see Briefing). America and, increasingly, China are ascendant, accounting for 76 of the world's 100 most valuable firms. Europe's tally has fallen from 41 in 2000 to 15 today.

This imbalance in large part reflects American and Chinese skill, and complacency in Europe and elsewhere. It raises two giant questions: why has it come about? And can it last?

In themselves, big companies are no better than small ones. Japan Inc's status soared in the 1980s only to collapse. Big firms can be a sign of success but also of sloth. Saudi Aramco, the world's second-most-valuable firm, is not so much a \$2trn symbol of vigour as of a desert kingdom's dangerous dependency on fossil fuels. Even so, the right sort of giant company is a sign of a healthy business ecology in which big, efficient firms are created and constantly swept away by competition. It is the secret to raising long-run living standards.

One way of capturing the dominance of America and China is to compare their share of world output with their share of business activity (defined as the average of their share of global stockmarket capitalisation, public-offering proceeds, venture-capital funding, "unicorns"—or larger private startups, and the world's biggest 100 firms). By this yardstick America accounts for 24% of global GDP, but 48% of business activity. China accounts for 18% of GDP, and 20% of business. Other countries, with 77% of the world's people, punch well below their weight.

Part of the explanation is Europe's squandered opportunity. Political meddling and the debt crisis in 2010-12 have stalled the continent's economic integration. Firms there largely failed to anticipate the shift towards the intangible economy. Europe has no startups to rival Amazon or Google. But other countries have struggled, too. A decade ago Brazil, Mexico and India were poised to create a large cohort of global firms. Few have emerged.

Instead, only America and China have been able to marshal the process of creative destruction. Of the 19 firms created in the past 25 years that are now worth over \$100bn, nine are in America and eight in China. Europe has none. Even as mature tech giants like Apple and Alibaba try to entrench their dominance, a new set of tech firms including Snap, PayPal, Meituan and Pinduoduo are reaching critical mass. The pandemic has seen a

burst of energy in America and China and a boom in fundraising. Firms from the two countries dominate the frontier of new technologies such as fintech and electric cars (see Business section).

The magic formula has many ingredients. A vast home market helps firms achieve scale quickly. Deep capital markets, networks of venture capitalists and top universities keep the startup pipeline full. There is a culture that exalts entrepreneurs. China's tycoons boast of their "996" work ethic: 9am to 9pm, six days a week. Elon Musk sleeps on Tesla's factory floor. Above all politics supports creative destruction. America has long tolerated more disruption than cosy Europe. After 2000, China's rulers let entrepreneurs run riot and laid off 8m workers at state firms.

The recent erosion of this political consensus in both countries is one reason this dominance could prove unsustainable. Americans are worried about national decline, as well as low wages and monopolies (roughly a quarter of the S&P 500 index merits antitrust scrutiny, we estimated in 2018). *The Economist* supports the Biden administration's aim to promote competition and expand the social safety-net to protect workers hurt by disruption. But the danger is that America continues to drift towards protectionism, industrial policy and, on the left, punitive taxes on capital, that dampen its business vim.

In China President Xi Jinping sees big private firms as a threat to the Communist Party's power and social stability. The cowing of tycoons began last year with Jack Ma, the co-founder of Alibaba, and has since spread to the bosses of three other big tech firms. As party officials seek to "guide" incumbent private firms in order to achieve policy goals, such as national self-sufficiency in some technologies, they are also more likely to protect them from freewheeling competitors.

The more America and China intervene, the more the rest of the world should worry about the lopsided geography of global business. In theory the nationality of profit-seeking firms does not matter: as long as they sell competitive products and create jobs, who cares? But if firms are swayed by governments at home, the calculus changes.

As globalisation unwinds, rows are already erupting over where multinational firms produce vaccines, set digital rules and pay taxes (see Finance section). European hopes of being a regulatory superpower may become a figleaf for protectionism. Others with less clout may erect barriers. To assert its sovereignty, India has banned Chinese social media and hobbled American e-commerce firms. That is the worst of both worlds, depriving local consumers of global innovations and creating barriers that make it even harder for local firms to achieve scale.

It's the acorns, not the oaks

It would be a tragedy if only two countries in the world proved capable of sustaining a process of creative destruction at scale. But it would be even worse if they turned away from it, and other places admitted defeat and put up barricades. The best gauge of success will be if in 20 years' time the list of the world's biggest companies looks absolutely nothing like today's. ■



Israel

A chance of renewal

Getting rid of Binyamin Netanyahu is a good way to help Israel clean up its politics

NEVER BEFORE has Binyamin Netanyahu's hold on the premiership of Israel looked so weak. On June 2nd his opponents, led by Naftali Bennett (pictured) and Yair Lapid, agreed to form a government that excludes the man who has dominated his country's politics for the past 12 years (see Middle East & Africa section). The only thing left is for the Knesset (Israel's parliament) to hold a confidence vote. Mr Netanyahu will do his utmost to sabotage it. But if he fails, his long reign will be over.

"King Bibi" has overseen a flourishing high-tech economy and one of the world's best covid-19 vaccination campaigns. He has made peace with several Arab states and kept Israel safe, notwithstanding a recent war in Gaza. Many of his policies are now generally accepted, even by the politicians pushing him out.

Yet he also sowed division, mixing nationalism, chauvinism and resentment of elites in order to win elections. He clung to power even after being charged with corruption. And when threatened he has lashed out at anyone in his way. The press, the judiciary, the police—all were part of a "witch hunt" aimed at bringing him down, he said.

If Mr Netanyahu stays, it will drag a weary electorate to the polls for a fifth time since 2019. If he goes, it may help heal Israeli politics. True, his Likud party is still the largest in the Knesset, and his nationalist and religious base remains an electoral force. But he has been a uniquely talented demagogue, eloquent and ruthless in equal measure. Though he will remain on the scene (and surely plot his revenge), his removal from the top job makes the political mood in Israel a little less toxic. Moreover, his prosecution and political comeuppance are proof that Israel's institutions have held firm in the face of his assault.



Mr Netanyahu, though, has shown up Israel's vulnerabilities. The next government must fix them. That will not be easy, as the parties in the coalition do not agree on much. Wisely, Mr Bennett, who would become prime minister, has set expectations low. "We will focus on what can be done, instead of arguing over what is impossible," he says. A budget is a priority, since Israel has not had one in two years. But the new team should also focus on governance—and start by closing the loophole that lets a person under indictment serve as prime minister.

Other steps might include depoliticising the police, whose aggressive tactics helped spark riots inside Israel that culminated in Palestinians firing rockets into Israel from Gaza. Splitting the job of attorney-general, so that one person is not both chief prosecutor and legal counsel to the government, is another good idea. At some point a conversation should be had about the Supreme Court, which has great power and little accountability.

Reforms will be difficult. But tackling any of these problems would have been impossible under Mr Netanyahu, who used the legal system as a bogeyman. His reliance on the ultra-Orthodox also meant that civil marriage remains illegal and public services closed on the Sabbath, although most Israelis favour liberalising such things.

The new coalition includes an Arab party, but little progress is likely with the Palestinians. Still, small steps are possible, such as increasing funding in Arab parts of Israel and alleviating the suffering in the occupied territories and in Gaza. "Everyone will have to postpone the realisation of some of their dreams," says Mr Bennett, an ardent supporter of the settler movement. A government grounded in reality? That doesn't sound so bad. ■

Commercial property

House of pain

As remote working outlasts covid-19, someone has to foot the bill for empty offices

IN RECENT WEEKS diversity at work has taken on a new meaning. As vaccination progresses in the rich world and restrictions ease, some huge office tenants, such as Goldman Sachs, a bank, want staff back full-time, while others, like Citigroup, a rival, expect some employees never to set foot in a central business district again. Behind the posturing, a consensus is slowly emerging that white-collar desk-warriors should be allowed to stay at home more often post covid-19—and that many probably will. Office landlords, however, and those who bankroll them, continue to pretend that no storm is coming. With billions of dollars sunk in undesirable buildings, they face a reckoning.

Office bulls rest their case on two pillars (see Finance section). One is to argue that recent evidence shows pandemic-induced disruptions are superficial and temporary. Offices have been spared the carnage that lockdowns have inflicted on other

kinds of commercial property, such as restaurants and shops. Even as rent collections plummeted elsewhere, most corporate tenants have continued to pay on time. Debt delinquencies remain a rarity, and prices paid for floor space in global cities have held up. No matter that most open spaces remain eerily silent. Developers report rises in viewings and lettings, and investors have already pledged billions of dollars to new projects.

The other strut of the bulls' argument involves heroic predictions about the future of work. Workers have missed water coolers so much, they say, that most are bound to flock back. Die-hard sofa-surfers can be persuaded back to the office with new rooftop pools, pet-friendly concierges and Michelin-starred canteens. Even if some skip a few days a week, the need to space out desks in an era of pandemics, and rising appetite for brainstorming pods after a year of dreary Zoom calls, should keep de- ►►

► mand for office space constant. And even if it does not, unwanted space can always be salvaged by, for instance, converting it into industrial-chic lofts or logistics centres.

Such optimism is at best deluded, at worst dishonest. It is too early to tell if offices have avoided the pain that months of social distancing have caused in other industries. Government help, lenient banks and central-bank largesse may have postponed delinquencies and distressed sales. Corporate tenants are locked into long-term leases which have yet to expire, and may not be renewed. Transaction prices are a poor gauge of the market's health: because buyers and sellers cannot agree on terms there have been few sales. In some countries new covid-19 variants may prompt restrictions, delaying a full reopening.

Even small drops in long-run occupancy rates will have a big effect on rents and prices. The IMF reckons a rise in vacancy rates of five percentage points in all commercial property would cause valuations to fall by 15% over five years. Fitch, a rating agency, says that if workers in America do not commute at least three days a week, valuations could tumble by over half.

Given that Moody's, a rival, predicts a fifth of the country's offices will be empty by 2022, landlords may have to brace themselves for worse. Uncertainty is compounded by the indecision

of many firms. Many still have to make their mind up about hybrid working, which may yet become a new norm.

Abstract debates about aggregate demand hide the fact that property pain will not be evenly shared. As firms seek to lure talent and foster teamwork by revamping their HQs, snazzy offices in city centres will remain in demand (though making them fancier, healthier and greener will cost the landlords dearly).

Yet they are outnumbered by old and poorly ventilated blocks which will struggle to lure staff and therefore tenants. Upgrading or converting them will often cost a fortune. At best, their owners face falling rents or sales at marked-down prices. At worst, they risk having capital tied up in stranded assets.

Cheaper office rents will help some firms. But the financial costs are immediate. Banks have lent \$2.4trn to commercial property in America alone. But they have brought loan-to-value ratios down from the dizzying heights of the financial crisis. A market correction would probably slap them in the face without knocking them out. Instead, more of the bill will fall on equity holders, not least pension funds and insurers which, in their hunt for returns in an era of low interest rates, have been loading up on property for years. The sooner they admit that losses are coming, the sooner they can try to limit the damage. ■

America's crime spike

Killing reform

What is the best approach to rising violent crime?

AFTER GEORGE FLOYD'S murder a year ago, Atlanta's mayor scolded the rioters who were smashing up parts of her city. "This is not a protest...This is chaos," Keisha Lance Bottoms said. "If you care about this city, then go home." The speech was so well pitched that some overexcited pundits wondered whether she might one day run for president. One year on, Ms Lance Bottoms has declined even to run for re-election as mayor, in part because Atlanta is suffering from a violent-crime wave which she has been unable to calm. One affluent neighbourhood is keen to secede from the city altogether.

What is true in Atlanta is also true in other American cities. Property crimes are down, but violent crime has risen. Murders increased by about 30% between 2019 and 2020, a rise that shows little sign of slowing (see United States section). This change puts at risk what has been perhaps the most benign social trend in America so far this century: the great crime decline. It also threatens liberal reforms, designed to reduce the prison population and to rethink policing, which have spread across much of the United States in the past decade.

Arguments for criminal-justice and police reform are easier to make when crime is falling, as it had been for 25 years. When voters are fearful, they become more receptive to punitive policies. The origins of America's high incarceration rate, which stands at 700 inmates per 100,000, compared with 140 in Britain and 78 in Germany, lie in the crime wave that lasted from the 1960s to the 1990s. A new crime wave could result in a repeat.

Meanwhile, reformers will discover that, if they have nothing to say about how to tackle rising crime, they will not be trusted to run the city and county offices that control America's decen-

tralised justice system. Ms Lance Bottoms is not alone. In other cities mayors and prosecutors who thought they would be rewarded for championing reform in the name of racial justice are finding out that voters prize safety more.

What, then, should be done? The causes of today's spike in murders are unclear, but probably stem from a mixture of pandemic-related stresses to both civilians and police, rising gun sales and reticence among police after the protests inspired by Mr Floyd's death. Police forces say they have not pulled back from violent neighbourhoods for fear of inflaming tensions. But a similar murder spike in Baltimore after protests against a high-

profile police killing in 2015 suggests otherwise. Mistrust between the police and those they are policing is bad for crime statistics. Without co-operation, murders become hard to solve, and unsolved murders lead to retaliatory killings.

Part of the answer lies in restoring that trust by promoting community policing and hiring more officers. "Defund the police" is one of the most counterproductive political slogans of re-

cent times and should be cast aside. People in high-crime neighbourhoods want accountable, effective policing, not the abolition of police forces. Reforming police practices, which should remain a priority, will be more palatable if budgets are not being slashed at the same time.

If locking people up eliminated crime, America would already have eradicated it. The link between crime and incarceration is weak. But more imprisonment may be coming unless mayors, prosecutors and the police bring the killing spree under control. If Mr Floyd's legacy was a return to mass incarceration and more thuggish policing, it would be to pile one tragedy on another. ■



Latin America's giant

Brazil's dismal decade

Few countries have fallen so fast. To recover, Brazil must recognise what went wrong

HOSPITALS ARE full, favelas echo with gunfire and a record 14.7% of workers are unemployed. Incredibly, Brazil's economy is smaller now than it was in 2011—and it will take a lot of strong quarters like the one reported on June 1st to repair its reputation. Brazil's death toll from covid-19 is one of the worst in the world. The president, Jair Bolsonaro, jokes that vaccines might turn people into crocodiles.

Brazil's decline was shockingly fast. After the military dictatorship in 1964-85, the country got a new constitution that returned the army to barracks, a new currency that ended hyperinflation and social programmes that, with a commodity boom, began to ease poverty and inequality. A decade ago the country was flush with oil money and had been awarded the 2014 World Cup and the 2016 Olympics. It seemed destined to flourish.

Brazil failed to seize the opportunity. As our special report this week argues, consecutive governments made three mistakes. First, they gave in to short-termism and put off liberal economic reforms. Blame for this belongs chiefly with the left-wing Workers' Party, in office in 2003-16. It oversaw growth of 4% a year but did not invest to raise productivity. When commodity prices fell, Brazil faced one of its worst-ever recessions. The governments of Michel Temer and Mr Bolsonaro made some progress on reform, but stopped far short of what is needed.

Second, in their efforts to shield themselves from the fallout of Lava Jato, a huge anti-corruption probe, politicians have resisted reforms that would curb graft. The prosecutors and judges behind Lava Jato are partly to blame. After some were shown to have had a political agenda, their probe became bogged down in Congress and the courts.

Finally, Brazil's political system is a millstone. State-sized districts and 30 parties in Congress make elections expensive. Even more than in other countries, politicians tend to back splashy vote-winning projects rather than worthy long-term reform. Once in office, they stick with the flawed rules that got them elected. They enjoy legal privileges that make them hard to prosecute, and a huge pot of money to help them keep power. As a result, Brazilians despise them. In 2018 only 3% said they trusted Congress "a lot".

Disillusion paved the way for Mr Bolsonaro. A former army captain with a soft spot for the dictatorship, he persuaded voters to see his political incorrectness as a mark of authenticity. He vowed to purge corrupt politicians, crack down on crime and turbocharge the economy. He has failed on all three counts.

After passing a pensions revamp in 2019, he abandoned the agenda of his liberal economy minister, fearing that it would cost votes. Tax and public-sector reform and privatisations have stalled. Cash hand-outs helped stave off poverty early in the pandemic, but were slashed at the end of 2020 owing to rising debt. The rate of deforestation in the Amazon has soared by over 40% since he took office. He has taken a chainsaw to the environment ministry, cutting its budget and forcing out staff. His environment minister is under investigation for wood-trafficking.

On covid-19, Mr Bolsonaro has backed anti-lockdown rallies

and quack cures. He sent planeloads of hydroxychloroquine to indigenous tribes. For six months he ignored offers of vaccines. One study found the delay may have cost 95,000 lives.

Rather than tackle graft, he has protected his allies. In April 2020 he fired the head of the federal police, which is investigating his sons for corruption. His justice minister quit, accusing him of obstruction of justice. Days earlier, Mr Bolsonaro had threatened the independence of the Supreme Court. In February his attorney-general shut down the Lava Jato task-force.

Brazilian democracy is more fragile than at any time since the end of the dictatorship. In March Mr Bolsonaro fired the defence minister, who reportedly refused to send the army into the streets to force businesses to reopen. If he loses re-election in 2022, some think he may not accept the result. He has cast doubt on electronic voting, passed decrees to "arm the public" and boasted that "only God" will remove him.

Actually, Brazil's Congress could do the job without divine intervention. His conduct probably qualifies as impeachable, including "crimes of responsibility" such as urging people to defy lockdowns, ignoring vaccine offers and firing officials to shield his sons. Congress has received 118 impeachment petitions. Tens of thousands rallied on May 29th to demand his ejection.

For now, he has enough support in Congress to block impeachment. Besides, the vice-president, who would take over, is a general who is also nostalgic for military rule. The last time Congress impeached a president, Dilma Rousseff in 2016 for hiding the size of the budget deficit, it split the country. Mr Bolsonaro would cast himself as a martyr. Many of his supporters are armed.

In the long run, as well as replacing Mr Bolsonaro, Brazil must deal with the cynicism and despair that got him elected, by tackling chronic low growth and inequality. That will require dramatic reform. Yet the very resilience that has protected Brazil's institutions from the predations of a populist also makes them resistant to beneficial change.

The actions required are daunting. Above all, the government needs to serve the public rather than itself. That means reducing the privileges of public-sector workers, which eat up an unsustainable share of government spending. Politicians must not spare themselves either. Office holders should have fewer legal protections. They should shake up the electoral and party systems to let new blood into Congress.

The next government must fight corruption without bias, restrain wasteful spending, and boost competitiveness. A crack-down in the Amazon should go hand-in-hand with economic alternatives to deforestation. Otherwise, sooner or later, new Bolsonaros will emerge.

A long journey ahead

Barring Mr Bolsonaro's impeachment, Brazil's fate will probably be decided by voters next year. His rivals should offer solutions rather than peddle nostalgia. His successor will inherit a damaged and divided country. Unfortunately, the rot goes much deeper than a single man. ■



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Mexico responds

You urge Mexicans to vote against the president and his party in elections to Congress ("The puritan from Tepetitán, May 29th). Your message is surprising, not because of *The Economist's* ideological position, but because of the virulence of your writing and the fragility of your reasoning. You seem to believe that the majority of Mexicans, especially the poorest, are wrong and are backing the wrong person.

When Mexico elected Andrés Manuel López Obrador as president it was predicted that he would lead the country to economic ruin through devaluations, hyperinflation, indebtedness and a direct clash with the United States. None of this has happened. On the contrary, the administration of President López Obrador has fulfilled its promise to prioritise spending on our poorest citizens. At the same time, it has maintained fiscal discipline and sound public finances. For example, it has achieved historic increases in the minimum wage, while keeping inflation at bay and the currency stable. It has also quickly succeeded in building a relationship of respect and collaboration with the administration of President Joe Biden.

The failure of the elites to understand the president is reflected in your pages; they paint a bleak picture of Mexico, losing sight of the fact that, although the Mexican economy suffered the ravages of the pandemic, it will grow by around 6% this year, without having piled on debt, with healthy finances and significant levels of foreign direct investment. You also question the government's response to covid-19, but overlook how Mexico managed, in a matter of months, to double its hospital capacity and ensure universal access to the vaccine.

But the assertion that stands out the most for its absurdity is the suggestion that President López Obrador has somehow undermined Mexican democracy, when he has done precisely the oppo-

site. His decades-long struggle against a closed system has given rise to a strong, plural and diverse democracy, in which the people are consulted directly on substantive issues as never before. There is now full freedom of the press and of thought in Mexico. President López Obrador is accountable to the public and engages in a dialogue with the press, which feels free to criticise him at a level incomparable with his predecessors (just open any Mexican newspaper).

The elitist view, defended ad nauseam, is that the majority is wrong and doesn't know what is good for it. Isn't it time to ask if it is the elite—angry and exasperated with President López Obrador—and not the people that is wrong?

MARCELO EBRARD
Secretary of foreign affairs
Mexico City

Supporting the patent waiver

Your work showing that the death toll from covid-19 is almost certainly far higher than we think, especially in developing countries, is exemplary. A year ago the barrier to battling this cruel disease was science. Today it is inequality. Contrary to what you submit, price is still an obstacle ("Vaccinating the world" May 15th). The mRNA jabs from Pfizer/BioNTech and Moderna are among the most expensive of the vaccines on offer, averaging \$18 a dose.

Shareholders are becoming billionaires, while we fail to vaccinate the billions who need help. These high prices are beyond the reach of most countries and dramatically reduce the number of doses that COVAX can afford. This is despite up to \$100bn in public subsidy and studies showing production costs of as little as 60 cents a dose for mRNA vaccines. A key way to drive down prices and drive up supply is to waive the patents, end these artificial monopolies and transfer technology as rapidly as possible to create greater competition.

This is what we learned in the struggle against HIV/AIDS.

It is the quickest way to end the pandemic, and safeguards the populations of rich countries from new variants. Given your strong commitment to the power of the free market it is surprising that you do not join Joe Biden and support the patent waiver in the face of this health emergency.

WINNIE BYANYIMA
Executive director
UNAIDS
Geneva

The olive revolution

Green investing is questionable because of the difficulty of filtering out the noise from the signal ("Hot air", May 22nd). I suggest that some form of scale be devised so that companies can be categorised as, say, green, olive, brown and charcoal. Those that have no chance of ever being green can at least be encouraged to strive for olive.

RICH HASMONEK
Chicago

Equities as alternatives

Your tribute to the late David Swensen, who mastered Yale's endowment fund, noted that the shift toward "alternative" investments of college and university endowments began in the 1980s ("The holly and the ivy", May 15th). Yale clearly benefited from Swensen staying at the forefront of this transformation. An earlier shift in endowment management began in the 1970s. McGeorge Bundy, president of the Ford Foundation, wrote a report in the late 1960s that compared the ten-year performance of endowments among 15 "important educational institutions". Bundy called for a move to a modern, professional form of investment management that was later embraced by Swensen.

Bundy's report also laid the blame for the poor performance of endowments on their management by trustee committees, stating that their focus on maximising income led to bond allocations at the expense of better-performing equities. The report cited the

University of Rochester's professional investment office, the first in the United States, for achieving an annual return of 6% a year above the other 14 endowments. Without Bundy's report supporting investment in equities Yale's shift to alternatives might never have happened.

DOUGLAS PHILLIPS
Chief investment officer
University of Rochester
Rochester, New York

A Dickens of a twist

A letter (May 15th) wondered where Charles Dickens found the inspiration to weave fraudulent pyramid schemes into two of his novels. The model for the scheme in "Martin Chuzzlewit" was the Independent West Middlesex Fire and Life Insurance Company. The company had its own fire engines that dashed round putting out fires for a couple of years; and life insurance was good for profit until too many people started dying. When the money ran out in 1840 the directors divided up the wine in the cellar under their head office and left for France.

DAVID PUGSLEY
Cullompton, Devon

The infamous Bank of Tipperary was the inspiration for the scheme in "Little Dorrit". John Sadleir, a member of Parliament, was the key figure in the fraud. His was a standard pyramid scheme where depositors were attracted by high interest rates and new deposits were constantly required to pay out redemptions. When his swindling was about to be discovered, Sadleir took himself off for a drink at Jack Straw's tavern and followed this up with a draught of acid. His body was found on Hampstead Heath.

ALI MIREMADI
Leamington Spa, Warwickshire

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Director of Commercialisation, Industry & Procurement

Post based at ESA Headquarters in Paris, France

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The land that ambition forgot

BERLIN AND PARIS

Once a corporate heavyweight, Europe is now an also-ran. Can it recover its footing?

IN 1984 A besuited 20-something American executive on a visit to France offered Europeans a few tips for corporate success. Entrepreneurs needed to be given a second chance if they failed and government bureaucrats made for lousy investors, he told a television interviewer. His advice was sage. But European companies ruled the global corporate roost alongside those of America and, occasionally, Japan. Why should they take advice from this uppity Californian newcomer?

Nearly four decades later the company founded by that young upstart, Steve Jobs, is worth more than the 30 firms in the German blue-chip DAX index combined. Its value is not far off that of all 40 companies in France's CAC index. Apple's success has been notable, but it is the decline of corporate Europe that is truly striking. At the start of the 21st century 41 of the world's 100 most valuable companies were based in Europe (including Britain and Switzerland but excluding Russia and Turkey). Today only 15 are (see chart 1 on next page).

When it comes to business, Europe used to pack a punch. In recent decades companies such as Nokia, Nestlé or BP have been among the world's ten biggest firms by market capitalisation. Now only on occasion does Europe have a firm in the top 20 globally. In 2000 nearly a third of the combined value of the world's 1,000 big-

gest listed firms was in Europe, and a quarter of their profits. In just 20 years those figures have fallen by almost half. Europe is a place for companies such as Amazon and TikTok to find customers, not a base for local firms to conquer the world.

Some of Europe's lost stature is down to the rise of China. But American firms have reinforced their position at the vanguard of global business. European ones, alongside those from Japan, have not. In 2000 Europe had a share of corporate wealth commensurate with its roughly one-third of the world economy. That is no longer true (see chart 2 on subsequent page).

Some Europeans might ask: *et alors?* Many on the continent are ambivalent about big business, preferring a dense collection of mid-sized firms, such as the German *Mittelstand*, to corporate goliaths. But if it continues, the waning of Europe's business will bring consequences. Big firms invest in innovation, which boosts economic growth. Left to regulate only foreign groups, Europe's ability to shape global business norms—on privacy, say, or the uses of artificial intelligence—will look weak. European policymakers' cries for “strategic autonomy” will come to nothing without corporate backing.

Plenty of European companies still make consumers swoon. LVMH of France flogs Louis Vuitton handbags from Beijing

to Buenos Aires; German cars and Swiss pharmaceuticals are sought-after around the world; and homes are stocked with products made by Unilever, an Anglo-Dutch giant and IKEA, a Swedish forest-feller. But look at who dominates the global corporate economy, and Europe's geopolitical rivals now prevail.

When it comes to big business, America, the spiritual home of free-market capitalism, has been on top for decades. It is the ascent of Asia that has rejigged the global corporate landscape. China's rapid economic growth has spawned corporate titans to match. Over 160 of the world's 1,000 most valuable firms are now Chinese, a fourfold rise in two decades.

Ne me quitte pas

Assuming that Chinese firms would have gate-crashed the *Fortune* Global 500, which ranks the world's biggest companies by revenue, in relative terms it was inevitable that some Western firms would be nudged out of the global elite. That left European firms vying with American ones to stay dominant. It is in this tussle that Europe has fallen by the wayside. In 2000 the 100 biggest firms in Europe were worth \$4.6trn, rising to \$8.9trn now. America's equivalent companies started at \$7.4trn but are now worth \$26trn. (China's top 100 firms are worth \$8.8trn.)

How did European companies fall behind their American competitors? The first reason is that its firms seem to have been outmanaged. Look at firms competing in the same sector over the past 20 years, and incumbent American companies more often than not went on to churn out bigger profits and are better positioned for future success than their European counterparts.

There are many exceptions to this rule: ►►



► Siemens of Germany has outshone its industrial rival General Electric, for example, and Airbus, based in France, has had fewer problems of late putting jets together than Boeing, its American foe. But by and large it has been better to bet on Nike of America over Adidas of Germany; JPMorgan Chase in New York over Credit Suisse in Zurich, or America's Walmart over France's Carrefour. Their advantage in terms of profits and sales growth is often small, but compounds over time.

A second reason Europe fell behind in recent decades is that its biggest firms are in the wrong industries. The sectors European firms dominated 20 years ago, such as insurance or telecoms, have grown at a glacial pace. Even if European firms did well, as many did, they mattered less as the world moved on. America, by contrast, had already made significant inroads into software and e-commerce, industries that would soon redefine the global economy and generate trillion-dollar valuations.

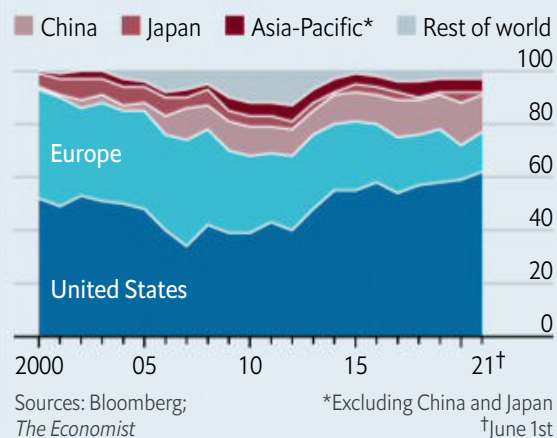
The third, and most striking, reason Europe has fallen behind is the lack of newly created firms in its blue-chip indices. Many of the biggest companies in America, such as Amazon, Netflix, Tesla or Facebook, are young enough to be run by their founders. In Europe old names prevail.

Of the world's 142 listed firms worth over \$100bn, 43 were set up from scratch in the past half-century, 27 in America and ten in China. Only one was in Europe: SAP, a German software group founded in 1972. Half of Europe's richest ten billionaires inherited fortunes spawned long ago; in America nine of the top ten are wealthy solely because of companies they founded.

Many—but by no means all—of the American newcomers are in tech. That has led policymakers and business leaders in Europe to make light of the problem. The

If only we could turn back time

Top 100 companies by market capitalisation
World, % of total



failure by France or Germany to build big new firms is regrettable, they concede, but America has merely stolen a march in the consumer-internet realm. Silicon Valley was the right place to be at the right time to build this new generation of firms: a felicitous nexus of universities and research institutes, venture capital and America's consumer-first reflexes. When that bubble bursts, new business models will emerge that Europe will be ready to seize.

It's more fun to compute

In fact, the absence of European tech giants is symptomatic of an entrepreneurial deficiency that transcends the world of apps and clicks. America's nous at creating new companies—and Europe's failure to match it—extends beyond Silicon Valley, argues Thomas Philippon of New York University.

A global chain of cafés might have been expected to hail from Italy, home of the espresso and barista. Instead Starbucks has overrun the world, despite America's reputation for insipid coffee. A green car giant should have emerged from Europe,

which has a proud engineering tradition and is at the forefront of environmental regulation. Yet it is an American newcomer, Tesla, that is now worth roughly as much as every other American and European carmaker combined (see Business section). Why could Britain's or Switzerland's storied financiers not have created an asset-management giant to dominate the markets? Today it is BlackRock, set up in 1988, which manages \$9trn of global investments from New York.

Each of these has found success in its own way. But a combination of factors helped propel them to global corporate superstardom. The ability to raise ample capital, from private investors to large pension funds, is a recurring theme in America that is all too often missing in Europe. So too is the belief that a company that develops a better product will, eventually, displace incumbents, however powerful.

The balance is unlikely to shift in Europe's favour any time soon. The pipeline to become the world's next trillion-dollar company is stuffed with firms from America and China, not Britain or Spain. According to PitchBook, a data provider, in the past decade venture capitalists have backed 661 companies that went on to be worth over \$1bn. Only 78 of these "unicorns" are in Europe, worth 8% of the 661 firms' over-\$2.5trn total.

Disentangling the cause of Europe's corporate malaise from its consequences is tricky. One reason frequently cited is the economy: how could European companies be expected to do well when the European economy fared so poorly since 2000? And indeed its share of global GDP has trended down (see chart 3 on next page) as emerging markets have grown faster. But that offers only a partial explanation.

In the past 20 years, in absolute terms ►►



▶ Europe has added as much additional economic output as America—roughly \$10trn each. (China added \$14trn by growing at a faster rate but from a smaller base.) That is partly because of Europe's larger population. European GDP per head is about two-thirds that of America. The figure has not fallen in the past 20 years thanks mostly to poorer eastern Europeans getting closer to Western income levels.

Looking at European GDP as a whole assumes firms there have access to the entire economic zone. Too often they do not. In theory the EU offers its firms and citizens a “single market” stretching across much of the continent (though no longer to Britain, one of the biggest economies). In practice it is a part-built edifice. It is still fiddly for a bank in Portugal to offer services in Finland—much harder than for a Californian bank to expand to Texas.

Beyond linguistic and cultural differences, legal complexities often get in the way. “When [European] companies think of their home market, they usually think of their home country, not of Europe,” says Carl-Henric Svanberg, chairman of Volvo, a Swedish lorry maker, and of the European Round Table for Industry, which represents large companies.

These internal barriers mean Europe has many smaller firms operating at national, not continental, scale. Each country tends to have its own banks, utilities, airlines and supermarkets. (Europe has over 100 mobile operators, compared with a handful in America or China.) These lack the economies of scale and opportunities to grow quickly enjoyed by firms plying the American or Chinese markets.

In the absence of easy opportunities at home, European firms have expanded overseas more zealously than their American counterparts. Firms in richer countries in Europe, the source of most of its multinationals, now generate over half their income elsewhere, up from just over a quarter in 1997, according to Morgan Stanley, a bank. That includes around a third from poor countries; large German firms now sell more to emerging markets than they do domestically. American groups generate over 70% of their income locally. That can make managing European companies a case of constantly putting out fires in far-flung subsidiaries.

At home, European companies complain that they face a less favourable business environment. Europe's brand of capitalism is often softened by a stronger role for unions. That has its allure, as workers toil shorter hours and enjoy greater job security. It also means higher labour costs. The political protection afforded businesses—from hostile takeovers, say, which are rare in mainland Europe—is one reason their financial results are underwhelming.

Europe's smaller firms now find them-

This is the world we live in

Europe, % of world total



selves competing against global behemoths with inbuilt advantages. Large firms can afford to buy and try new technology, borrow at cheaper rates and absorb fixed costs more efficiently. They tend to spend relatively more on research and development. The dearth of big companies helps explain why European spending on research, at 2.1% of GDP, is below the average of the OECD, a group of mostly rich nations.

Que reste-t-il de nos amours?

Even as Europe has fallen out of business league tables, it has continued to play a role as a global regulator. Sometimes that has seemed its main contribution to the global business landscape: look at rules on privacy or combating climate change. Because standards set by the European Commission are often the most stringent in the world, and businesses want to build a single set of products for all markets globally, they often end up applying across the world. But EU rulemaking that applies in effect only to foreign firms—as does much of the tech regulation devised in Brussels—has increasingly been attacked as covert protectionism. Currently a rulemaker, Europe may risk losing that position.

European policymakers are well aware of Europe's relative decline. They point to mitigating factors. Some corporate giants

in America profit from areas which in Europe are the responsibility of the state—running hospitals or railways. Others such as airlines and mobile carriers are monopolies that bilk customers. And can profits or market capitalisation truly reflect the value of a company to society?

There has also been a return to European *dirigiste* reflexes. If the private sector has proved unable to grow firms that are a match for global titans, perhaps politicians can help? More overt intervention by the public sector in the economy—both helping European firms and stymieing their competitors—was increasing before covid-19. The pandemic has turbocharged it.

Under the banner of promoting Europe's “strategic autonomy”, rules preventing takeovers of some European firms by foreign rivals have been bolstered. Proposals are being developed to hamper foreign companies backed by non-EU governments who wish to do business in Europe—a measure plainly aimed at China. Talk has grown of a “carbon border tax” to ensure European firms are not at a disadvantage when competing against challengers from places with less ambitious climate-protection policies.

France and Germany are among those who have demanded the EU stop blocking favoured mergers of big European firms into pan-continental champions, despite the scepticism of antitrust regulators. Politicians are willing to shovel public money into industry in the hope of guiding its priorities—the idea of “picking winners”, popular in the 1970s, has made a comeback. Myriad state-backed investments are happening in green technologies. France has revived the position of “high commissioner for planning”. Across the continent public funds are being invested in everything from startups to large listed firms.

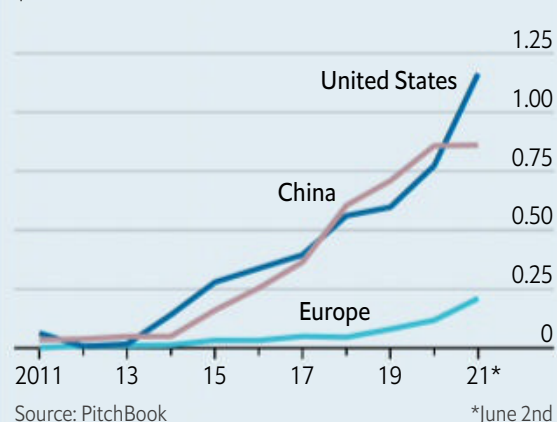
Hast du etwas Zeit für mich?

Europe's boosters see plenty of corporate life left there. From utilities to power majors, firms in Europe have gone further than others in greening themselves. Those in other parts of the world will have to follow suit at some point. European universities remain world-class. But Europe also has unique challenges. One is demography: the old continent is living up to its name. There are more over-65s than under-15s nowadays and populists across the EU make it hard to boost immigration.

That leaves few levers to pull to help Europe's firms compete globally. The most obvious, deepening the single market, has fallen off the political agenda. Helping law firms and software designers sell across the continent seamlessly lacks the pizzazz of picking industrial winners. But stiffening competition in Europe is key to creating firms fit for corporate glory. The path to global business begins at home. ■

Harder, better, faster, stronger

Market capitalisation of venture-backed companies valued at over \$1bn
\$trn





Liberals and crime spikes

Reality bites

ATLANTA

A surge in violent crime poses a risk to life, and to criminal-justice reform

AFTER THE sweet tea was poured but before the tomato soup arrived, in the middle of a crowded restaurant, Bill White lifted his shirt-tail to reveal the rubberised grip of a .38 revolver. “Everyone’s got one these days,” he says. Over lunch, he and two other residents of Buckhead, the wealthy northern section of Atlanta, swap stories: packs of cars blocking intersections for illegal street races, would-be thieves casing houses, neighbours too frightened to leave their homes. Lenox Square, an upscale mall, installed metal detectors after a spate of shootings. Mr White is head of fundraising for the Buckhead Exploratory Committee—a group of residents who have organised to push for Buckhead’s independence from Atlanta, driven, he explains, by three factors: “crime, crime and crime”.

As of May 16th, murders were up by 59% in Atlanta compared with the same period in 2020. Rapes, aggravated assaults and thefts from and of cars are also well above levels in 2020. Nor is this just an Atlanta problem. Nationally, the spike in murders that began in 2020—according to data from the Major Cities Chiefs Association,

homicides in American cities rose by 33% from 2019 to 2020—shows no sign of abating. This is a problem first, of course, for the people living in the neighbourhoods where much of this violence takes place. But it also poses a problem for advocates of criminal-justice reform, who made great strides in the 2010s, when violent crime was falling. Convincing people to back lighter sentences and decrease their reliance on police when murders are rising may prove more difficult.

The reasons why murder rates are on

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the rise nationally remain unclear. In fact criminologists are still debating why crime fell in the 1990s and 2000s. The pandemic closed schools and other institutions, leaving young people unoccupied and anxious. Police who might otherwise have been deployed to high-crime neighbourhoods or investigative duty were assigned to respond to protests. Gun sales soared, and many faced financial hardships and other stresses. But violent-crime rates were rising, albeit more slowly than over the past 14 months, even before the covid-19 epidemic began, beginning in 2014.

Whatever the reason, “homicides can be sticky”, says John Pfaff of Fordham University in New York. “A shooting in March can lead to a subsequent shooting in July, when retaliation comes up.” In other words, even if the pandemic is partly responsible for the homicide spike, any post-pandemic decline may well be gradual.

As a result, crime now has a political salience that it has not had in years. A poll released last month showed crime was the second-most-important issue (behind covid-19) for Democrats in New York, who will choose a mayoral candidate in a primary on June 22nd. Eric Adams, a former police officer who has recently defended the use of stop-and-frisk tactics and made public safety the centre of his campaign, leads in some polls. Jenny Durkan, Seattle’s mayor, has faced criticism from both the right and left over her handling of the city’s police-free “autonomous zone” and tactics used by police against protesters; she will not seek another term. Chesa Boudin, San

► Francisco's district attorney, faces a recall campaign, driven by the perception that he is too soft on crime. Crime has become central in the race to succeed Keisha Lance Bottoms, Atlanta's mayor, who also unexpectedly declined to seek a second term.

But before she leaves office, she plans to hire another 250 police officers. Other cities have taken a similar approach. Minneapolis, where a majority of the city council voted last year to defund and disband the police department, will spend \$6.4m to hire new officers. While president of Baltimore's city council, Brandon Scott championed a measure to cut the police department's budget by \$22.4m; since taking office last December as mayor, he has proposed increasing it by \$28m. Oakland will soon restore most of the \$29m it cut from the police budget last year.

Such reversals testify more to the political than the budgetary costs of criminal-justice reform. But that does not mean reform is doomed, or that all voters will reject all reform-minded candidates. Last month Tishaura Jones was elected mayor of St Louis on a platform that included reducing reliance on police and closing one of the city's prisons. In a primary race on May 18th, Larry Krasner, Philadelphia's crusading district attorney, trounced his police-union-backed opponent. On that same day, Ed Gainey, running on a reformist platform, defeated Bill Peduto in a primary election. He is poised to become Pittsburgh's first black mayor.

Still, blame-mongering for violence is an effective cudgel for conservative state-level politicians to wield against liberal cities. Brian Kemp, Georgia's Republican governor, is making Atlanta crime central to his re-election campaign—the better to win back Trump-hesitant Republicans in the city's suburbs. Florida has passed a law that lets the governor and his cabinet reverse any changes to cities' police budgets that they deem unwise. Other states have proposed (and Texas has passed) measures cutting off funds to cities that slash police budgets. Unlike states, which the Tenth Amendment protects against federal overreach, cities are subsidiary creations of the state, and have no legal shield against these sorts of pre-emptive measures.

Reformers will have to change how they pitch their ideas. They cannot simply make a moral case. The impetus that led conservative and liberal states alike to reduce their prison populations in recent years was largely to save money. And, as Mr Pfaff notes, homicides are up nationwide, so if rising violent-crime rates indict reform in liberal cities, they must also indict the status quo in more conservative areas that have not pursued reform.

"The rise in violence just makes everything related to these debates over how to reform policing and how to deal with po-

lice violence more difficult," explains Patrick Sharkey, a sociologist at Princeton University. "There's a knee-jerk response because we've been so reliant on police and prisons as the institutions we turn to to deal with violence." Faced with a choice between more and less policing, people frightened of violent crime will rarely choose less.

In fact the choice is not binary. Police play a crucial role in fighting crime and, in the near term, cities may require a more robust police presence than some reformers

would like. They do not play the only role, however. A wealth of evidence exists that other institutions—anti-violence non-profits, drug-treatment programmes, summer jobs for young people—also help. Politicians who want to reduce violent crime in their cities and states should remember that, just as activists should remember that reform is a harder sell when people do not feel safe. Because, since murders usually rise in the summer, when people are out in the streets until late, safety is unlikely to return soon. ■

Congress

Sins of commission

WASHINGTON, DC

The failure of the January 6th commission illustrates the two main weaknesses of America's democracy

IT WAS THE distilled essence of legislative dysfunction. On May 28th the Senate rejected a painstakingly negotiated bipartisan bill that would have set up a commission to study the storming of the Capitol building by incensed Donald Trump supporters on January 6th. Though the vote was 54 in favour and 35 opposed (all of them Republicans), the measure technically failed, because a filibuster—ostensibly the threat of debating a bill to death—requires 60 votes to avoid it. This flop puts two serious problems with American democracy in relief. One is that Congress can be hamstrung by a minority. The other is that the Republican Party is unwilling to escape the shackles of Trumpism.

Start with the filibuster rule and its result. It would be hard to concoct a clearer

demonstration of what is wrong with the rule as it currently functions. It did not matter that 60% of those present voted in favour of the commission, nor that the opponents of the bill really had no intention of debating it. Indeed, the blocking of the commission shows that the majority of elected Republicans wish not to discuss the attack on the Capitol, as if it could be shushed away like a child's nightmare.

Many Democrats, who hold majorities in both chambers, hope that the death of the commission may also hasten the death of the filibuster itself, thus allowing them to legislate without needing ten Republican votes that will probably never materialise. Chuck Schumer, the Senate majority leader, plans to move forward with voting-rights legislation by the end of June. Party activists believe this bill represents the best chance of breaking the filibuster's stranglehold over the chamber. Filibuster rules have been slowly chiselled away over the past few decades: first to allow the confirmation of executive-branch appointees by simple majority, and, later, justices to the Supreme Court. A further whittling by exempting voting-rights and civil-rights legislation could be in order.

Tweaking the rules, or dismantling them entirely, would take just a simple majority of senators, which Democrats possess by the narrowest margin possible. But two conservative Democrats—Joe Manchin of West Virginia and Kyrsten Sinema of Arizona—remain staunch opponents of filibuster reform. Both of them attempted to drum-up Republican support for the commission, without much to show for it (Ms Sinema skipped the vote altogether). Activists hope that their failure will permanently shake their confidence in the filibuster, which after all is often justified on



Look away now

► the ground that it promotes bipartisanship. But both seem unlikely to budge,

The other upshot is that Republicans remain in no mood for introspection. After a few brief weeks of being clear-eyed about who inspired the attack and what it meant, Congressional Republicans lost their appetite for moving beyond Trumpism. True believers in Mr Trump's conspiracy theory of electoral fraud have every incentive to continue; meanwhile those merely going along out of cravenness or opportunism have no incentive to speak up.

The party's congressional leaders, Mitch McConnell in the Senate and Kevin McCarthy in the House of Representatives, have reverted from antipathy for the former president to accommodating him. In the immediate aftermath of the attack, Mr McCarthy said that the president was "practically and morally responsible for provoking the events of the day". His deputies negotiated the contours of the would-be commission; then he voted against it. Mr McConnell, who denounced Mr Trump forcefully in February, whipped against the bill's passage in the Senate (calling it a "purely political exercise" for Democrats who "would like to continue to debate things that occurred in the past").

This is but the latest warning sign to flash. On May 30th, Republicans in Texas were only narrowly thwarted from passing some of the strictest voting rules in the country when Democrats staged a walkout, denying a quorum. States have enacted 22 restrictive new voting laws this year as a response to Mr Trump's false allegations of fraud. More than six months after the election, conspiracists in Arizona are still counting and recounting the ballots that gave President Joe Biden a narrow win in the state, hunting for traces of bamboo fibres in the paper ballots to show that they were imported from Asia.

The party recently dumped Liz Cheney, a staunchly conservative Republican representative, from her leadership post for the sin of not adopting the requisite *omertà* towards Mr Trump's anti-democratic tendencies. On June 1st, over 100 prominent American political scientists and scholars signed an open letter warning that some states "no longer meet the minimum conditions for free and fair elections" and that "our entire democracy is now at risk".

The odds that concerned Republicans can reverse, or even stall, their party's slide look remote. Mr Trump remains the party's *de facto* leader, and barring a health crisis (or an indictment), plans to run for president again. Having demonstrated his version of the anti-democratic playbook—denouncing the legitimacy of lost elections and trying to break the constitutional guardrails against reversing the results—Mr Trump, or some imitator, might well try the same again. ■



Endless Frontier Act

Political science

LOS ANGELES

Congress is set to make a down-payment on innovation

SENATOR HARLEY KILGORE, a West Virginia oil prospector's son who carried around a horse chestnut for good luck, had a vision for American science. It was too dominated, he thought, by big business and by the university system: the country's practical needs were an afterthought. In 1942 Kilgore proposed creating a federal bureaucracy, responsive to the public, that would guide scientific research for the good of the country and distribute its benefits geographically.

Kilgore was opposed by Vannevar Bush (pictured above), who led American R&D during the second world war. Bush felt that scientific research should be directed by the scientists themselves. In a report for the president called "Science: The Endless Frontier", Bush summarised his ideas. Government, he said, should fund research. But rather than direct this research towards meeting social needs, it should instead seek to advance science for its own sake: basic, not applied, science was to be the primary objective. Bush won the day. The National Science Foundation (NSF), born in 1950, has largely followed the principles he laid out.

Kilgore is about to get his revenge. The Senate will probably soon pass the US Innovation and Competition Act, known until recently as the Endless Frontier Act. Though the bill is named after Bush's re-

port, it will take American science policy in a more Kilgorean direction. It lays out ten "key technology focus areas," such as artificial intelligence, biotechnology and advanced materials science, to which new research funding will be directed. It allocates funding for regional tech hubs spread across the country. And its objectives are clear: the goal, in true Kilgorean fashion, is to "enhance the competitive advantage and leadership of the United States in the global economy".

When it was first introduced in May 2020, the Endless Frontier Act planned to set aside \$100bn for a new Directorate for Technology and Innovation within the NSF. This would have borrowed characteristics from the Defence Advanced Research Projects Agency (DARPA), the military-research office responsible for spearheading research that led to the internet, the computer mouse and mRNA vaccines (see Science and technology section).

The act's ambitions have since narrowed. Instead of the full \$100bn, the NSF's new tech directorate will get \$4bn. Some of the money has gone to pork. A significant portion has been diverted to the Department of Energy's national labs. Though more than \$50bn of funding will go to NSF, much of it either replaces existing funding or is earmarked for causes other than R&D, such as STEM education.

Innovation experts advise against looking a gift horse in the mouth, however. Federal spending on research has fallen from more than 1.2% of GDP in 1976 to less than 0.8% today. As a portion of the federal budget, it has dropped from 12% at its 1960s peak to 3%. The money set aside for R&D in the new bill will not reverse this slide. But the law will still deliver substantial additional funding to the NSF: its budget for 2022 will be 27% higher than in 2021 and will double over the next five years. Jonathan Gruber of the Massachusetts Institute of Technology, whose work helped to spur the legislation, views the act as a "down payment" towards future innovation.

Others view it as a missed opportunity. Samuel Hammond of the Niskanen Centre, a think-tank, acknowledges that the influx of cash is valuable, but pines for what might have been. Science, he says, needs not just new funding but new institutions as well. Some researchers spend more than 40% of their time on administrative tasks such as grant-writing. Studies have found grant evaluations are inconsistent and subjective. Since the number of grant applications has increased faster than available funding, high-quality work may languish unfunded. And though scientists tend to do their best work in their younger years, the recipients of research grants have been getting steadily older.

Mr Hammond believes that government agencies that fund research have be- ►►

come sclerotic: he sees a “compliance culture” resulting from a risk-averse leadership wary of heavy-handed congressional oversight. That is a problem, says Benjamin Reinhardt, an independent researcher who has studied DARPA, because big wins come from taking risks. “All the value,” he says, “is in the long tail.”

One reason to create new research-funding institutions is to turn the scientific process on itself. Some economists have

suggested prizes for big breakthroughs. New Zealand has experimented with lotteries for grant funding. Two researchers, Adam Marblestone and Sam Rodriques, have proposed Focused Research Organizations, stand-alone research efforts concentrated on solving single, well-defined science or technology problems.

Mr Gruber agrees that existing funding agencies are too conservative, and wishes the bill were bigger. But he believes it is a

good start. The promotion of regional tech hubs, he says, could result in a virtuous cycle: once science and technology are no longer concentrated on the coasts, Americans may become more receptive to increases in R&D funding in the future. And, in the selection of ten key technology areas to focus on, he sees the beginnings of a less tentative approach to innovation. “You can call it picking winners,” he avers. “I call it taking risks.” ■

Homes with wheels

Vanity projects

LONGMONT, COLORADO

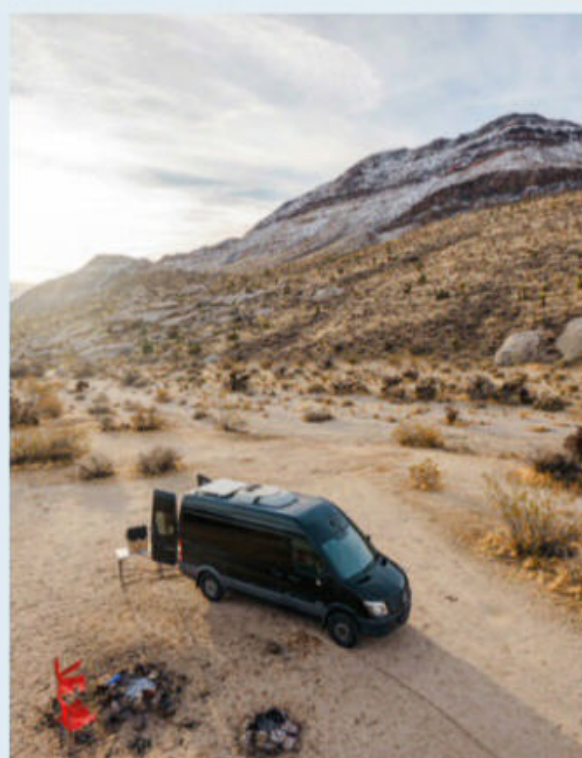
The epidemic pushed more Americans to try a nomadic lifestyle

IN 2019 LUCY JACOBSON and her colleagues at Rossmönster Vans flew to San Francisco carrying “suitcases full of cash”. They were on their way to purchase five retro Volkswagen vans made in the 1980s in order to drive them back to Longmont, Colorado and turn them into custom adventure-mobiles. The road trip home took them to Las Vegas (“to let our freak flag fly”), through Utah’s canyons and over the Rockies. It was the kind of expedition increasing numbers of Americans are hankering for.

About 140,000 vans, RVs or boats were counted as housing units in 2019 according to the Census Bureau, up from about 102,000 in 2016. The circumstances of people who live in their vans can be glaringly different. On one end of the spectrum are those who, like the folks in Jessica Bruder’s book “Nomadland” have little alternative. On the other end are van lifers or “digital nomads” who covet a bohemian, go-anywhere lifestyle. Type #VanLife into Instagram and more than 10m posts appear. Most photos feature pristine Western landscapes, some kind of van or mobile home that resembles a Manhattan studio apartment on wheels, and at least one smiling 20-something. Dogs are a popular accessory.

As social-media influencers spread the van-life gospel, a lucrative industry blossomed. A custom van renovation at Rossmönster costs customers anywhere from \$50,000 to \$100,000—not including the cost of the van itself. Dave Walsh, the founder of Vanlife Customs in Denver, says he has seen revenues grow by at least 50% every year since his company’s founding in 2016.

When the pandemic hit, things looked bleak. National parks closed, leaving fewer picturesque places to camp. Jeff Cavins, a co-founder of Outdoorsy, an Airbnb-esque marketplace for van and camper rentals, says 95% of the firm’s bookings were cancelled. Then,



Doing it for the ‘gram

business boomed. Outdoorsy’s bookings rocketed by 4,000% between April and October of 2020 as parks reopened and Americans fled city centres for greener places. Dave & Matt Vans in Gypsum, Colorado went from five employees in early 2020 to nearly 30 today. Rossmönster can take no new customers until September 2022. The trend looks likely to continue. Surging house prices and the normalisation of remote work may push more wannabe nomads out on the road.

Ask any van lifer why they decided to trade their roof for wheels and the word “freedom” will inevitably come up. “I wanted to travel, was single and free and thought ‘Why not try this?’” says Mr Walsh. But the lifestyle that has gone viral on Instagram is a shiny version of what can be a dusty existence. “There’s a lot of butts and thongs with beautiful views behind them”, Mr Walsh adds, “but it’s not always a real portrayal of van life.” The endless search for parking, toilets and wifi might not be so alluring.

Horseracing and drugs

Off-track

ELMONT, NEW YORK

The sport of kings could do with more punters and fewer drugs

“IT’S A WIN-WIN,” says Zach Noren, who is visiting Belmont Park, a racetrack on the border of Long Island and New York City, with his three-year-old son Jack. “He likes the horses and I like to bet.” Mr Noren normally pays attention to the “ponies” only for Triple Crown events, like the Kentucky Derby. This is not unusual. There were few punters at Belmont on a recent Sunday afternoon. The virus may have made people wary of placing a flutter in person, but interest in racing has been dwindling for years.

The public perception that the horses are mistreated or over-medicated has contributed to that. Part of the problem, says Bennett Liebman of Albany Law School, is that there is no regular mainstream sports coverage of racing. “Any time somebody covers horse racing, outside of the Triple Crown, the news tends to be bad.” There has been no shortage of bad news lately. Medina Spirit, the winner of the Kentucky Derby, tested positive for an excessive amount of betamethasone, an anti-inflammatory drug permitted only in limited amounts. On June 2nd Churchill Downs, home of the Kentucky Derby, suspended Bob Baffert, Medina Spirit’s trainer, for two years. Last month the New York Racing Authority banned him from its tracks, including the Belmont Stakes, the third leg of the Triple Crown, taking place on June 5th.

Mr Baffert and his shock of white hair are known beyond the stables and grandstand. His horses have won 16 Triple Crown races, including six Kentucky Derbys, but he has also received many medication infractions, five in 13 months alone. He denies any wrongdoing. Kathy Guillermo of PETA, an animal-rights group, is sceptical. She recalls that in 2000, after one of his horses tested positive for morphine, Mr Baffert testified that it might have eaten a poppy-seed bagel. ▶▶

► Ms Guillermo says that the medicines can cause catastrophic injuries and death on the track. Some horses are on several, known as “stacking”. As long as they are within the approved limit, this is allowed. But the cumulative damage of masking an injury means that a horse is at greater risk of collapsing and needing to be put down.

Forty-nine horses died at the Santa Anita track in California during the 2018-19 fiscal year, according to a report by the Los Angeles district attorney. Many had multiple drugs in their systems on the day they died. California eliminated stacking in 2019. Some trainers complain that the different rules in each jurisdiction are confusing. That will soon change, as national oversight is coming into the home stretch. The Horseracing Integrity and Safety Act will require uniform safety standards, including anti-doping and medication control. Scott Stanley, a chemist at the Gluck Equine Centre, is helping to write the rules. He is already seeing fewer medication infraction in his service lab in Kentucky.

But racing faces other challenges. IBIS-World, a research firm, says the industry is in a state of long-term decline. Fewer punters means track closures. Arlington Racecourse outside Chicago, which has just begun its final season, will be sold for development. Some tracks have diversified into slot machines and casinos. Demand has eroded as competing entertainment and other forms of gambling siphon off potential customers. Racing’s loyal fans tend to be on the older side. The Triple Crown events still retain interest, but a few minutes of excitement once a year is not a durable business model. ■

Measuring poverty

The hunger wanes

LOS ANGELES

Fewer Americans are going hungry. What went so right?

“SINCE WE TOOK office,” tweeted President Joe Biden on May 23rd, “hunger rates have dropped 43%.” That statistic, although astonishing, is broadly correct, according to data from the Census Bureau. “That’s the American Rescue Plan at work,” Mr Biden added. The claim of causality, however, is less certain.

Since April 2020 the Household Pulse Survey, carried out by the Census Bureau, has asked a representative sample of American adults whether there was enough to eat in their household over the previous week. The share who respond either that there is “sometimes” or “often” not enough food are classified as living in hunger. Over the course of the covid-19 epidemic, this proportion has hovered around 10%. It peaked just ahead of Christmas at 13.7%, equivalent to 30m people. Since then the figure has fallen steeply (see chart). The survey, carried out between April 28th and May 10th, put the figure at 8.7%, or 18.2m people.

Although Mr Biden would like to credit his American Rescue Plan for this improvement, the claim does not stand up to closer inspection. The president signed that bill on March 11th, yet by March 17th the share of people saying that they had

Making dough

United States, hunger rate
% of adults



Source: Census Bureau

not eaten properly had already fallen to its lowest since covid-19 was diagnosed widely in America. It took at least six days for the first Rescue Plan cheques, worth \$1,400 for every adult, to be received, suggesting that the initial decline in hunger was caused by something else.

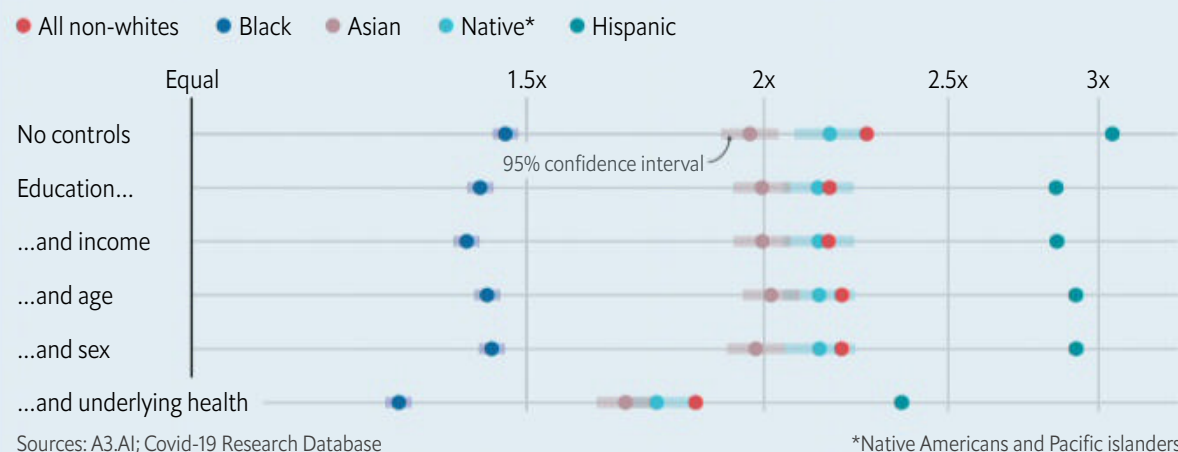
There are several possible reasons why hunger has fallen. First, the steadily improving economy. The unemployment rate has fallen from its peak of 14.8% in April 2020 to 6.1%. However, hunger rates did not begin to decline until the final days of 2020; they remained stubbornly high last year even as unemployment fell. On a state-by-state basis, there appears to be little relationship between the change in unemployment and the fall in hunger rates over the past year. Another possible explanation is the reopening of schools, which may have given more children access to subsidised food. But again, school reopenings did not begin until well after hunger began to trend downwards.

A third possible cause of the decline in hunger is one that Mr Biden may not wish to trumpet. An earlier round of stimulus cheques worth \$600 was delivered in December 2020 to every American adult, under legislation signed by the outgoing president, Donald Trump. That bill also increased food-stamp benefits by 15%. The cheques were sent out on December 29th, precisely when hunger rates began falling.

Although the American Rescue Plan may not have started the decline in hunger, it is likely to play a role in sustaining it. Experts say that the vital signs of labour markets, such as earnings and unemployment—which is still nearly twice its pre-pandemic rate—are closely tied to levels of hunger. Therefore extraordinary benefits, such as the cheques approved by both Mr Trump and Mr Biden, have kept hunger rates lower than they otherwise would have been. The government may hand out more money later this year, while the American Rescue Plan has extended food stamps, too. Both policies are likely to help keep hunger at bay. ■

Crossing the intersection

United States, odds of being infected with covid-19, compared to white people
By ethnic group, April-December 2020, log scale



Sources: A3.AI; Covid-19 Research Database

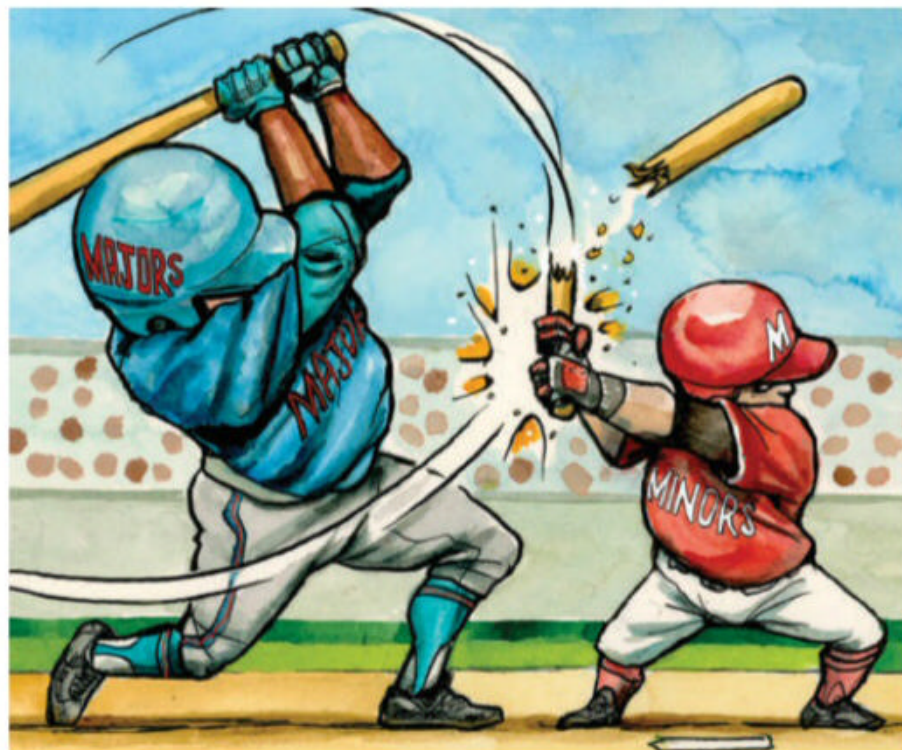
*Native Americans and Pacific islanders

Covid racial disparities

According to the Centres for Disease Control and Prevention, racial minorities were three times as likely to be hospitalised with covid-19 as whites. But why? Data scientists at A3.AI, a health-research group, analysed the insurance records of 14m patients in the Covid-19 Research Database, 380,000 of whom were diagnosed with the virus, to disentangle the causes for *The Economist*. Even controlling for education, income, age and prior health conditions does not explain what is going on. But one notable finding is that Hispanic Americans were the most vulnerable group.

Lexington | Who owns the national pastime?

The takedown of minor league baseball is a revealing blow against localism and tradition



NOTHING SAYS spring like the thwack of cowhide on maple. It follows that nothing says mass vaccination like the sound echoing through a crowded ballpark. Lexington and 3,000 other Marylanders experienced this thrill one sunny evening last week in Frederick, Maryland, home of the redoubtable Frederick Keys.

It was in effect the team's first home game, the previous day's fixture having been rained off and rarely had the rituals of small-town baseball—back after an 18-month, covid-enforced hiatus—felt more welcome. Children with cotton candy and mitts raced around the concourse. Neighbours and workmates hailed each other, relaxed and mostly maskless, as they queued for pizza and beers. All rose for the Star-Spangled Banner—whose lyrics are particularly prized in Frederick, having been written by a former resident, Francis Scott Key, after whom the ball club is named.

In Section 107, behind home plate, season-ticket holders indulged in another minor-league tradition: casting a critical eye over the new blood. It included the anthem singer (“We’ve had worse—remember the bell ringers?” said Meri-Lyn, an executive assistant who rarely misses a game) and the over-enthusiastic compere (“She needs to keep off the energy drinks,” deadpanned Don, a security-systems expert, between logging each ball into his tablet). All the Keys’ white-uniformed players were also new.

“They don’t look too bad,” offered Don’s wife, Colleen, as the home team battled back from a sleepy start. Its lead-off hitter, a 22-year-old Nevadan called Nick Hernandez, was the first to impress the diehards, after he smacked a double, then a homer in the sixth. “Go Nick, we need you to win this!”

This ritual reflected the churn of talent that is a feature of pro baseball’s lower levels. Since the evolution of the farm system in the 1920s, the minors have had little or no control over their squads, which their major-league patron recruits, pays and treats as feeder-stock. In a normal year, two-thirds of a minor-league team may be new, and is liable to be raided by its patron during the season. Any minor leaguer good enough to be embraced by the fans is almost by definition halfway out the door. The same is true for a local ballpark’s announcers and entertainers. Paradoxically, this makes one of the most locally rooted institutions in American sport—the small-town ball club where local couples court each

other, entertain their children and advertise their businesses—also one of the most transient.

With forbearance on both sides, this has been a fruitful tension. Major League Baseball, the game’s monopolistic overseer, has suffered the inefficiencies of a diffuse system for its talent-pool. Minor-league fans have forgone a deep relationship with their teams for the thrill of a prestigious connection to the majors and high-quality baseball—often in places, such as Clinton, Iowa, or Niles, Ohio, with little else to boast of. But MLB has upset this balance. Teams like the Keys are emerging from covid-induced calamity—the scrapping of a season and over 40m prospective ticket sales—to the most traumatic shake-up of the minors in decades.

On the expiry of a pre-existing operating agreement late last year, MLB cut its roster of minor-league affiliates by 42, hardened its grip on the remaining 120, and in the process scrapped several historic leagues, such as the Ohio-based International League (founded in 1884). Advances in talent-spotting had reduced its need for a large reserve. The Keys, for 30 years a farm team of the Baltimore Orioles, is among the teams that have lost out.

This change was also covid-related. When MLB first proposed its plans, in late 2019, they met high-level pushback. Over a hundred House members backed a bipartisan “Save Minor League Baseball” task-force. A related Senate resolution united both Republican senators from Iowa—which stood to lose three minor-league teams, including the Clinton LumberKings—with Bernie Sanders and Elizabeth Warren, whose states stood to lose one each. MLB’s chances of getting its way looked dicey. But the pandemic diverted political attention and the cancellation of the minors’ season made it hard for them to get it back. MLB ended up getting everything it wanted.

Its 30 franchisees are not the only beneficiaries. Player salaries in the minors have been increased (from a pitifully low base). Travel distances have been reduced. To its credit, MLB has meanwhile helped most of the teams it dropped to find another league. The Keys and its recent opponents, the West Virginia Black Bears, are among half a dozen that have formed a new league to showcase top college players ahead of the MLB draft in July. It should also be said that, while the diehards in Section 107 were livid at being junked by the Orioles, few other Keys fans seemed to care. Most minor-league watchers, having little connection to the players, come along for some baseball-themed fun. “It’s a great place to bring the kids, but I couldn’t say who’s playing,” said Dan, a regular attendee, sitting with his brother Leel, a thickly-bearded trucker.

Nonetheless, MLB has dealt a heavy blow to baseball’s regional infrastructure and traditions. Four of the affected teams have ceased operations—including another in western Maryland, the Hagerstown Suns. More will follow. The Keys will play half as many games as before, but even after shedding staff will not halve their costs. Of the 202 teams that have played in independent leagues over the past 30 years, almost half failed within four years.

In a minor key

This is a gloomy development, and not only for baseball fans. Politicians in both parties talk a lot about improving capitalism by righting regional imbalances, respecting place and communities, restraining monopolistic fat cats and so forth. It can be hard to take such talk seriously. It is even harder now, after they failed to protect the national pastime, as represented by the Frederick Keys, 41 other cherished local teams and their fans, against the cost-cutting of a sports monopoly that rakes in well over \$10bn a year. ■



Venezuela

A scofflaw's offer

CARACAS

Nicolás Maduro suggests he might persecute the opposition a little less if sanctions on his government are lifted

"HERE WE ARE. The winners!" boomed Nicolás Maduro at a televised ceremony on May 20th. It was the third anniversary of what the Venezuelan president describes as his "popular victory": an election in 2018 which secured him a second presidential term. "The election had such an important impact for us," agreed his wife, Cilia Flores. She was more right than she perhaps intended to be.

For it was that vote, a fraud managed by a biased electoral authority, that led dozens of Western countries to brand Mr Maduro a dictator and isolate his regime. The United States has imposed financial sanctions on him and most of his political allies, including Ms Flores. American companies, once the main buyers of Venezuela's crude oil, are prohibited from all dealings with the regime. The American government has offered a \$15m award for information leading to the arrest of Mr Maduro. Dozens of democracies have, to varying degrees, formally declared the head of the National Assembly, Juan Guaidó, to be the rightful leader of the country. The Ven-

ezuelan economy has continued its relentless collapse, shrinking by more than 70% since Mr Maduro took office in 2013. Oil production has fallen to levels last seen in the 1940s. One-third of the population do not have reliable access to sufficient food.

Yet if it was not a "popular victory", it was one for Mr Maduro. He has neutralised the opposition, making a mockery of the internationally supported plan to replace him with Mr Guaidó. The latter's hope—that an underpaid and demoralised army would switch sides and put him into power—now seems a fantasy. Of the almost 60 countries which at one stage accepted Mr Guaidó as president, all but eight have quietly dropped the designation from their communiqués this year.

Mr Maduro, a former bus driver snobbishly dismissed as a "donkey" by his enemies, has proved far wilier than they had imagined. "He has uncanny situational intelligence," says a former official in his government. "If there are three people in a room and one must die, it won't be him." The key to his survival has been patronage.

→ Also in this section

30 Argentine separatists

"The government is more like a clan now," says the ex-official. Generals, governors and gang leaders rule parts of the country like mini-fiefs. With oil money running short, the state hands out land and development rights to buy loyalty instead. In Los Roques, a Caribbean archipelago, mansions are being built in a national park. In the south, a chaotic gold rush has felled forests and poisoned rivers.

Mr Maduro now wants to reduce international pressure on his regime. His officials speak of a plan to "turn the page". The idea is that by holding slightly less rigged regional elections and sending a team to negotiate with the opposition, Mr Maduro may persuade President Joe Biden's administration to pare back sanctions imposed by Donald Trump. Mr Maduro "wants to figure out a way to give up as little as possible but get some legitimacy", says an official in the US State Department. A significant easing of sanctions is unlikely. But threats from the United States have grown quieter. (Mr Trump publicly mused about ousting Mr Maduro by any means necessary, including an invasion.) Europe has also changed its tune. "The talk these days is of regime improvement, not regime change," says a diplomat.

After denying for years that Venezuela faces a humanitarian crisis, Mr Maduro agreed in April to allow the UN's World Food Programme into the country to feed children. He hosted the WFP's boss, David Beasley (an American) in Caracas, the cap- ▶▶

ital. Eleven days later the government transferred six former executives of Citgo, an oil-refining firm based in America, from prison, where they had been since 2017, to house arrest. The attorney-general vowed to investigate the security services' role in three controversial killings.

In preparation for regional elections, the government and some elements of the opposition have agreed to empanel a new electoral council (CNE). It is still skewed in the regime's favour, but two of its five members are friendly to the opposition (previously only one was).

The announcement has, as intended, divided the opposition. Mr Guaidó initially rejected it as an "imposition of the regime", but others seem keen to take part. Henrique Capriles, a former presidential candidate who helped negotiate the deal, described it as the "least bad" CNE since Mr Maduro's predecessor and mentor, Hugo Chávez, won elections in 1998. The Norwegian government is sponsoring a parallel effort, which may take place in Mexico, to get both sides negotiating.

Public support for Mr Guaidó has fallen from over 60% in 2019 to around 15%, according to Datanalisis, a polling firm. His "mandate" derives from his leadership of the National Assembly elected in 2015. Its term expired in January. The assembly has granted itself a one-year extension, saying that no credible elections could be held under Mr Maduro. But many of the governments that publicly support him, and even some allies in the assembly, think it would be wrong to extend again.

If talks go ahead, the opposition's demands would include the release of political prisoners, perhaps a further overhaul of the CNE, an early presidential election (the next is scheduled for 2024) and the admission of foreign observers for all future polls. In return the regime wants the removal of all sanctions, the release of funds frozen by the United States and other countries, and the acceptance of a rival National Assembly created by Mr Maduro.

The United States has indicated that it would contemplate modifications, at least, to the sanctions. Mr Guaidó has moderated his earlier all-or-nothing approach to talks, with Mr Maduro stepping down as a precondition. Sceptics argue it is all a waste of time, and that Mr Maduro, who has held four rounds of negotiations with the opposition since 2013, has no intention of agreeing to anything that might lead to his losing power.

But there exists another view: that the president and his wife have their eyes on retirement, and would like to hand over to a palatable successor before new presidential elections in 2024. Mr Maduro, says the former government official, "wants to be remembered as the man who took on the United States and won". ■

Argentina

Rushing for the exit

MENDOZA

Covid-19 is inspiring separatism in Argentina's winelands

ON A RECENT Friday evening in Mendoza, the capital of Argentina's wine country, a group of well-to-do Mendocinos held a Zoom session with Luciana Sabina, a historian. "Self-rule, it's a big part of our DNA," she declared, as she took her viewers through earthquakes and economic crises, singing the praises of Italian immigrants who planted fructuous vineyards in the Andes. In her telling, an epidemic was a turning-point in the province's history. During a cholera outbreak in the 1880s Mendoza wanted to close itself off from the rest of the country. Argentina's then dictator, General Julio Argentino Roca, forced the province to open. "We lost the battle for self-rule, thousands of lives too," Ms Sabina concluded.

Once again, a pandemic is driving a wedge between Mendoza and Buenos Aires. Covid-19 is surging in Argentina; the country is recording 35,000 new cases a day. The provincial government has defied President Alberto Fernández by keeping its schools open. It has imposed a looser curfew and was against extending Argentina's lockdown beyond May 30th. The tension is inspiring demands for autonomy more generally. Some political activists even talk of independence from Argentina. They call it "MendoExit".

"The government just takes from us, it's a disgrace," says Luciano, a farmhand on a small vineyard in the province's Uco valley, where Malbec, the soft red wine that helped make Mendoza famous, is pro-

duced. "We live by our work, we Mendocinos provide for ourselves," remarks Cristina, a young mother checking French oak barrels in a nearby winery. Taxes on exports in particular are disliked. "That money, from our labour, should stay in Mendoza," says Juan, a winemaker.

Per person, Mendoza gets the least funding from the central government of all of Argentina's 23 provinces. Last spring José Manuel Ortega, a former investment banker and winemaker, paid for an opinion poll of Mendoza, Córdoba and Santa Fe, the country's richest provinces, which are all home to opposition leaders. Two-fifths of respondents in Córdoba and a third in Mendoza said they would back seceding from Argentina. Another poll in April showed support rising. "I hate saying it, but this is a failing state," says Mr Ortega.

One Mendocino legislator, José Luis Ramón, has proposed a plebiscite on independence when the province votes in mid-term elections later this year. A MendoExit movement, run by Hugo Laricchia, a pug-nacious acupuncturist, has joined forces with the established regional Democratic party to present a new force in regional politics, called Éxito. Alfredo Cornejo, a former governor of Mendoza and the leader of Argentina's Radical party, says that "Mendoza has what it needs to live independently." Mr Cornejo, who has presidential aspirations, is not calling for independence himself, but he plays up to it. "People want out of this Argentina and the way it's run, not the country itself," he says.

Whether all this will come to much is unclear. The constitution does not allow for secession, notes Anabel Sagasti, a senator of the ruling Peronist party. But in the Uco valley Raúl, a worker loading cases of Malbec for export, says he would vote for Éxito. "We can't go it alone, but with others like Córdoba, we could." His boss laughs at the idea. Not everybody will. ■



Eager to plough their own furrow



South Korea and China

They'll never take our kimchi

SEOUL

Social-media-fuelled spats over history and culture are growing more intense

A SUPERNATURAL DRAMA about evil spirits trying to bring down a medieval dynasty is not, you might think, to be taken too seriously. Yet when “Joseon Exorcist” hit South Korean screens earlier this year, it provoked apoplexy on social media. The show was historically inaccurate, fumed pedants. Not because it showed ancient Korean royals battling the undead, but because it showed them enjoying Chinese snacks, such as mooncakes and preserved eggs. Companies pulled their advertising. The show was taken off the air after just two episodes.

The incident is just one in a series of recent rows. In the past few months South Koreans have repeatedly taken to social media to rail against the “excessive” presence of Chinese brands on domestic television, forcing actors and broadcasters to apologise. They are even more outraged when Chinese state media, diplomats and social-media users suggest that important parts of Korea’s cultural heritage such as *kimchi* (fermented cabbage), *samgyetang* (chicken soup with ginseng) or *hanbok* (a

traditional form of dress) are in fact Chinese. In April nearly 700,000 Koreans signed a petition asking the government not to “give our land to China” by permitting a China-themed cultural park and hotel in the north-eastern province of Gangwon. In response, the (Korean) developers called off the project.

These arguments are the latest version of an old clash of competing nationalisms. South Koreans are painfully aware of their country’s history as a tributary to Chinese empires, and of how Chinese troops slaughtered South Koreans during the Korean war to save the despotic regime in the North. They are proud of their country’s modernity, wealth and democracy. Many

look down on China as poor, autocratic and altogether less sophisticated, while also resenting how important its vast markets are to South Korea’s own economic success. By contrast, Chinese sometimes view South Korea as a haughty minnow that derives its culture from its bigger neighbour, and that must occasionally be put in its place. “Koreans believe our culture is unique and was never dependent on China, whereas China thinks Korea only has a culture thanks to China,” says Lee Moon-ki of Sejong University in Seoul.

The tensions arising from such different interpretations of history—and the thin-skinned reactions to them—have surfaced periodically, ever since the two countries established diplomatic relations in 1992. A Chinese memorial to soldiers who died in the Korean war was the source of a big row in the 1990s. Ten years later there was another noisy quarrel over Chinese research into an ancient kingdom that once straddled what is now the border between China and North Korea. South Koreans saw it as an effort to reframe the history of their peninsula. The two countries appear to be sliding into another prolonged bout of mudslinging, this time intensified by social media.

South Koreans blame the bad blood on increasingly assertive nationalism in China. Xi Jinping, China’s leader, “keeps talking about the Chinese Dream, about rediscovering past glories after 100 years of pain,” says Mr Lee. Nationalist rhetoric ▶▶

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from officials encourages ordinary Chinese to echo inflammatory claims, such as that China invented *kimchi*, reckons Min Kwi-sik of Hanyang University in Seoul. The combination of official needling and provocations by ordinary people riles Koreans. "It's a sense of: they used to take our land, now they take our *kimchi*," he says. And the viral, engagement-driven mechanism of social media tends to amplify the loudest, angriest voices, even if they belong to only a small minority. "The internet is a great place to spread conflict and bury solutions," says Mr Min.

Still, the social-media spats reflect a deepening dislike of China. In two separate opinion polls conducted this spring, Koreans were about as favourably inclined towards China as to North Korea (with which they are technically still at war) and only barely more so than towards Japan, Korea's former colonial oppressor. Opinions of China were better as recently as 2019, suggesting that the pandemic may have coloured views. But the real turning-point, says Kim Ji-yoon, an analyst in Seoul who specialises in polling, was an economic boycott launched by China in 2017 in response to South Korea's deployment of an American missile-defence system known as THAAD. Shin Gi-wook of Stanford University agrees: "It was a bit of a rude awakening, alerting South Korea to the fact that China was an aggressive power."

Young people take a particularly dim view of China, especially when compared with other neighbours and America. "I know that eating *mala* soup or going to shops run by Chinese-Koreans will benefit the Chinese Communist Party eventually," says Kim Woo-jin, a 25-year-old from Seoul. Ms Kim, the polling analyst, is not surprised. Young people "don't know as much about China as about, say, America, so they make fewer distinctions between the country, the people and the government," she says.

The discontent is, for now, limited to the low-stakes cultural realms of food and television. Popular views of China have little bearing on the South Korean government's carefully calibrated diplomacy, casting China as an important strategic partner while stressing the centrality of the security alliance with America. Even Chinese officials have made the occasional conciliatory noise about the origins of *kimchi*. Chinese shop-owners and restaurateurs in Seoul report no signs of a boycott like the one that hit Japanese brands and noodle joints during a spat two years ago.

However, during a meeting with President Joe Biden in Washington on May 21st, Moon Jae-in, South Korea's president, was unusually explicit in his commitment to an American agenda aimed at containing Chinese influence. It is in everyone's interest to keep the *kimchi* wars cold. ■

India's far-flung territories

Run the jewels

DELHI

India plans to remake Lakshadweep, whether locals want to or not

THE BROCHURE writes itself: a scattering of coral ringlets, each encircling its own turquoise lagoon within the Arabian Sea, Lakshadweep is India at its most alluring. These 36 islands, together totalling just 32 square kilometres of land, are peopled by a matrilineal, mostly Muslim society where families make their living through seafaring and coconut harvests.

In the past fortnight this drop in the Indian bucket, just 70,000 people among 1.4bn, has come to exemplify a sort of controversy that is becoming incessant. The national government of Narendra Modi and his Hindu-first Bharatiya Janata Party (BJP) is flexing little-tested executive muscles to push through a package of reforms for the far-off islands. They would open up the archipelago to development, of tourism in particular. Locals are dismayed.

In theory "union territories" such as Lakshadweep are protected from some of the vagaries of electoral politics, since they are not part of any state. But that leaves the central government with sweeping power over them, which it increasingly employs, as Delhi and Jammu & Kashmir have lately discovered. Lakshadweep has an administrator—in effect, picked by the prime minister—who may rule without regard for local opinion. These days, that is just what he is doing.

Before the latest administrator, Praful K. Patel, arrived in December, the job had been held by career bureaucrats. Mr Patel is

a politician, a BJP man from Mr Modi's home state, Gujarat, where he was home minister. As administrator of Daman, a former Portuguese enclave north of Mumbai, he enraged tribal fishermen by demolishing 90 homes along a stretch of beach seized for development. Lakshadweep is even riper for such schemes.

Earlier this year Mr Patel published a slew of far-reaching draft laws that would give the administrator the right to acquire any land for "a public purpose". Other changes are striking given that 97% of the people of Lakshadweep are Muslim. Mr Patel would ban the sale of beef and expand liquor permits, the better to attract tourists from the rest of India. A Prevention of Anti-Social Activities Act, modelled after a similar law in Gujarat, would allow locals to be jailed without a hearing for up to a year—supposedly necessary because smugglers have been caught in Lakshadweep's waters. Sundry rules would displace a traditional port, replace local dairy with imports (from Gujarat) and disqualify politicians with more than two children from contesting local elections.

Some of the proposed changes are worthy of debate. Many in Lakshadweep are interested in fostering tourism. Few, however, seem to like Mr Patel's plans to do so. Lakshadweep's sole member of parliament, Mohammed Faizal, says that the most incendiary proposals, concerning liquor and beef, are diversions. Seizing land is the power the government really intends to exercise, he reckons.

On mainland India, the debate about Lakshadweep has tended to skirt the question of locals' wishes. A spokeswoman for the BJP explained how, "with proper planning, Lakshadweep can thrive and become the jewel in India's crown!" This is odd language to hear 74 years after India extricated itself from another country's crown. ■



Dweep blue

Regulating online content (1)

Shooting the messenger

India's ruling party turns against social media

WITH HIS 68.7m Twitter followers Narendra Modi, India's prime minister, nestles comfortably between the American celebrities Selena Gomez and Kim Kardashian in rankings of popularity on the service. This is not by accident. Mr Modi and his Bharatiya Janata party (BJP) have been early and avid exploiters of social media. Whether to lure new members to join the 180m who already make it the world's biggest political party, to hustle donations or amplify attacks on its critics, the BJP has relied on internet platforms to reshape India's politics.

But with Mr Modi's popularity tumbling in recent months, his government is turning against these useful messengers. At the end of May it began enforcing new rules that, among other things, make internet-based conduits of information, such as Twitter and Facebook, legally liable for any content that they carry, oblige them to respond promptly to official demands to block sites the government deems bad, and will force messaging services, such as WhatsApp, Signal and Telegram, to break the encryption that guarantees privacy to their users. The rules also extend government oversight of digital news platforms and streaming services, such as Netflix.

A first shot across the bows came on May 24th, when police arrived in force at Twitter's offices in Delhi and Gurgaon, a satellite city, to serve a legal notice regarding the firm's decision to mark some posts as "manipulated media"—part of Twitter's global efforts to identify blatant misinformation. The labels were added in response to investigations that showed BJP officials to be the source of tweets about a so-called media "toolkit" laying out how to attack the government's handling of the pandemic. The offending tweets alleged that the "toolkit" (which was later exposed as fake) had been created by the rival Congress party. But rather than investigate the political smear campaign, the government demanded that Twitter remove its tags.

Twitter's response, proclaiming its commitment to free speech within ethical bounds, and expressing concern for the safety of its employees, seems to have enraged the government further. The ministry of information technology accused the American firm of attempting to "dictate terms to the world's largest democracy". It said that Twitter routinely turned a blind eye to content hostile to India, such as use

of the term "Indian variant" to describe a nasty mutation of the coronavirus. The onus to protect Indians' freedoms lies with their elected government, not foreign tech firms, thundered Bhupender Yadav, a top BJP official, in an opinion column.

Mr Yadav has a point. No country has yet satisfactorily answered the question of how to regulate online content. It makes sense, at a minimum, for big multinationals to face some degree of local scrutiny and accountability. Yet India's tangle of laws and slow and capricious courts make the task of moderation infinitely complicated. In the absence of universal rules and standards, or of handing Chinese-style censorship powers to a single agency, it must rely largely on trust.

The trouble is that while India's new rules make it clear that the government no longer trusts internet firms to police themselves, its own behaviour brings into question whether ordinary Indian citizens can trust their government to protect their freedoms. With dismayingly frequency Mr Modi's men have used the institutions they control to target and punish not people who represent any clear threat to India, but rather the BJP's own critics and opponents.

Companies affected by the new rules are trying various tactics. Google is seeking exemption on grounds that it acts more like a utility than a content manager. Twitter has partly complied, by appointing an interim "grievance officer" to address complaints. Other firms, including WhatsApp, have sent in the lawyers: at least seven lawsuits are currently being heard in Indian courts. But don't hold your breath. Judges know that those who give rulings favourable to Mr Modi seem mysteriously to be rewarded with plump post-retirement sinecures. The internet is a marvel, but older ways of communicating still work, too. ■

Regulating online content (2)

Prohibited material

SINGAPORE

A new internet law in Indonesia sets a worrying example

AFTER A SLOW start, citizens of South-East Asian countries have in recent years taken to the internet with gusto, using it, like their counterparts everywhere else, to shop, to chat with their friends, to watch movies and to listen to music—and to criticise their governments. And as in many parts of the world, governments have found that they do not much like that last feature of this whole internet thing.

In response, many simply charge troublesome individuals using laws against



Jokowi is watching

age-old offences like treason, blasphemy and sedition. More thorough legislatures, such as Singapore's, have passed new laws prohibiting "fake news". Some governments are even more heavy-handed. Myanmar has lately been choking off access to the internet. Cambodia plans to set up a government-controlled "gateway" through which all internet traffic must pass, the better to inspect it for wrongthink. They are in the vanguard. Asian countries are "leading the way on digital censorship", says Linda Lakhdhir of Human Rights Watch, a pressure group.

As South-East Asia's most robust democracy, Indonesia might have been expected to buck this trend. But under President Joko Widodo, known as Jokowi, who has been in power since 2014, many senior officials have succumbed to what Ben Bland, the president's biographer, calls "knee-jerk authoritarianism". A law passed in 2008, ostensibly to protect digital consumers, is commonly used to silence critics of the government. In 2019 authorities throttled the internet in Jakarta in response to riots ginned up by a defeated presidential candidate, and in Papua, a region racked by separatism, when violent protests broke out there. The government is also fond of trying to scrub the internet clean of content it dislikes. The communications ministry frequently orders internet service providers to block websites it deems false or indecent.

The latest weapon in Indonesia's speech-suppressing arsenal is Ministerial Regulation no. 5 (MR5), a new decree that requires internet platforms to remove prohibited content, defined as anything that violates Indonesian law, incites unrest or disturbs public order, within as little as four hours. The government says it is intended to "preserve and protect the coun- ▶▶

try". Many suspect it is designed chiefly to preserve and protect the government.

The law requires "private-sector electronic-service operators", such as social-media platforms, search engines and financial, cloud-computing and data-processing services, to register with the government and to provide sensitive information. When the communications ministry issues a take-down notice, firms must comply within 24 hours—or four hours in the case of child pornography, material promoting terrorism or "content which disturbs society". Penalties for firms which

fail to comply include large fines and having their services blocked.

Critics say the law is vague and poorly worded, making it ripe for misuse. Online journalism websites, for example, could count as "private-sector electronic-system operators". "Prohibited content" could include anything that would provide access to such content. Merely using a virtual private network—to log into an secure work network, for example—might become illegal.

Another concern is the requirement that companies provide law-enforcement

agencies with "direct access" to their systems and data. What precisely that means is unclear, but it would expose platforms to all sorts of legal and business risks, according to the Asia Internet Coalition, which represents big international tech companies. It would also raise serious privacy concerns. The government insists that it respects the right to privacy and freedom of expression. Indeed it has postponed by six months the original deadline of June 2nd for companies to register. Citizens, firms and its less democratic neighbours will be watching to see which way it goes. ■

Banyan Minus the shooting

Japan's choice to persevere with the Olympic games is underpinned by nationalism

FEWER THAN 50 days remain before the apparently unstoppable opening of the 2020 summer Olympic games in Tokyo. The pandemic led to their postponement last year. Today the clock is ticking down against a backdrop of resurgent infections of covid-19 in Japan, a state of emergency in Tokyo and nine other prefectures, hospitals filling up and widespread opposition to the games from the public, businessfolk and medical experts.

All this counts for little in the eyes of the government and the International Olympic Committee (IOC). The games are a go "barring Armageddon", as one IOC member unhelpfully put it. Yet Armageddon is the real fear. The pace of vaccination in Japan has been snail-slow. Many foreign athletes will arrive unjabbed. The games risk going down in history as a massive superspreader event.

One reason for Japan's obduracy lies in its contractual obligations to the IOC. Another is the personal concern of the prime minister, Suga Yoshihide, not to lose face—and possibly support within the ruling party. But the establishment's sense of the Olympic games as serving a patriotic purpose should not be underestimated. Tokyo's Olympics were intended to banish a sense of being overtaken—"Japan passing", in the anglicised phrase—by a rising China and others following years of stagnation and the Fukushima nuclear disaster. Bad enough was 2020 passing. The games' total abandonment, in the herd thinking of the establishment, does not count as a blow for common sense. Rather, it could shatter the very notion that, as Mr Suga's predecessor put it, "Japan is back."

The country has been somewhere near here before. In the 1930s Japan lobbied hard to host the 1940 Olympic

games in Tokyo. It was to be Japan's moment to establish itself as a first-rate power. But like the pandemic today, war—Japan's own invasion of China in 1937 and a looming global conflict—overshadowed everything. The games were cancelled.

Japan's military adventurism contributed to the cancellation. Yet seeking to put a gloss on things, Kido Koichi, an adviser to Emperor Hirohito, declared that when peace reigned again, Tokyo would be ready to host the games and show the people of the world "the true Japanese spirit". After the war, Kido was condemned as a war criminal, but Tokyo was true to his word. In 1964 it put on a splendid games, which served as a modern, democratic coming-out party for Japan.

Ever since, Asia's hostings of the summer games have carried a broader significance for the host nation and even its neighbours. The 1988 games in Seoul, the South Korean capital, were a catalyst for democracy, helping to end decades of authoritarian rule. China's communist leaders represented the Beijing games in 2008 as a return to historical greatness. In



2022 Beijing hosts the winter Olympics, as the Japanese government is all too aware. As Jeff Kingston of Temple University in Tokyo points out, not holding the games would hand a propaganda coup to China.

Yet such grand narratives, coupled with the region's brittle nationalisms, can rub up against each other. Some South Koreans, led by two former prime ministers, are calling for their country to boycott the Tokyo games. At issue is a speck that appears on the official online map of Japan's Olympic torch relay. It represents the rocky islets of Dokdo, controlled by South Korea but claimed by Japan, which calls them Takeshima. This week South Korea "strongly" urged Japan to amend the map.

Japan's Olympic organisers appear to have tweaked the Dokdo dot to make it harder to spot. You now have to zoom in to see it. It has also been shaded, implying territorial ambiguity.

Yet regardless of how the dot got onto the Olympic map, or of the modifications made to it, Alexis Dudden of the University of Connecticut argues that it serves as "the ultimate dog whistle" to revanchist Japanese, many in the ruling Liberal Democratic Party, who think that nothing their country did during its militarist phase, including the occupation of Korea, warrants an apology. Whoever put in the dot knew it would get a rise out of easy-to-offend South Koreans. Again, Ms Dudden concludes, Japan's far right shores up an unhealthy form of Japanese nationalism that is of no help in improving the rocky relationship between the two countries. And that is to say nothing about the want of sportsmanship in Japan's riling its neighbour. But then nobody ever said the games are only about sport.



Fertility rules

A third is the word

BEIJING

China has gone from a one-child to a three-child policy in less than six years

FOR A GENERATION, China's government had ordained that "one child is enough" for married couples. Then, in 2016, it allowed them to have a second. On May 31st the ruling Politburo declared that a further relaxation of birth-control regulations would help China to achieve its goal of "coping" with a rapidly ageing population—a pressing task. It called for a three-child policy. Some parents will respond with glee, but most will shrug.

The government's previous fears of galloping population growth now seem quaint. At 1.3, China's fertility rate (the number of children an average woman is likely to have during her lifetime) is among the lowest in the world. Data from the latest decennial census, released on May 11th, showed that only 12m babies were born last year, a drop of almost 20% from 2019. It was China's lowest population growth since the 1960s, when the country was reeling from a famine. The population now looks likely to peak in the next few years—almost

a decade sooner than experts at the Chinese Academy of Social Sciences had, until recently, predicted.

No indication was given of when the three-child policy will take effect. But it will not end young people's growing disdain for baby-making. Reactions online—which on many topics tend to side with the Communist Party—brimmed with scepticism. "Do they not yet know that most young people are exhausted just supporting themselves?" said one netizen on Weibo, a Twitter-like site. "This policy is totally out of touch with the people," wrote another. An online poll by Xinhua, a state news agency, asked whether people would consider having three children. Just 5% of respondents said they would. Most others

said it was "out of the question". At least 31,000 took part in the survey before it was hastily taken down. Netizens gave a new twist to a common idiom, *minbuliaosheng*, which means "people have no means of livelihood". They used it to suggest that couples "cannot even speak of giving birth" (the characters are the same).

For parents who do wish to have a third child, the change of policy will be a relief. Illicit births can incur a large fine or, in the case of civil servants, result in dismissal. Some women are put under pressure—illegally—by zealous local officials to undergo abortions if giving birth would cause a quota to be exceeded. With the three-child policy, the government is sending a signal that it is "moving very decisively to a pro-fertility policy", says James Liang of Peking University. Mr Liang predicts that limits will "very soon" be scrapped altogether.

That would be a huge blessing for those who crave large families. But any impact on the overall birth rate is unlikely to be a lasting one. When China loosened its one-child policy, it hoped for a baby boom. After a brief initial uptick, however, births drifted downwards again. The fertility rate edged up slightly (see chart on next page). Mr Liang estimates that the three-child policy could boost the fertility rate to about 1.4, still well below the level of 2.1 which is required for a population to replace itself.

Encouraged by decades of indoctrina-▶

→ Also in this section

36 Tibet's new rail line

37 Chaguan: Zhou Enlai, the Confucian

tion, Chinese parents often feel—in cities as well as in villages—that a family's resources are best devoted to one child. The high cost of housing and education, the burden of caring for elderly parents, as well as crushingly long work hours also deter young couples from having more babies, or from reproducing at all. As more women pursue careers, many are delaying marriage and motherhood.

The Politburo said it would provide better child-care facilities, improve state-funded provisions for looking after the elderly, expand maternity benefits and lower the cost of education. It also promised to “protect the rights of women in employment”. It has been doing a poor job of it. In 2019 the government vowed to make more firms comply with existing anti-discrimination laws. These ban employers from asking women about their child-rearing plans in job interviews and from stating a preference for male applicants when recruiting. Offenders can be fined up to 50,000 yuan (\$7,800). In practice, they are rarely punished. In a survey released in November by Boss Zhipin, a recruitment website, more than one in three women said that managers had immediately begun looking for someone to replace them permanently after learning they were pregnant. Some firms illegally force female recruits to sign contracts promising not to have children for several years.

An image circulated by Xinhua of a poster promoting the three-child policy features two girls and a boy, probably to suggest that girls are good: a cultural preference for boys has encouraged sex-selective abortions and contributed to a highly unbalanced sex ratio. But some female netizens have noticed an irony. Lu Pin, a feminist who has been living in America since the arrest of fellow campaigners in 2015, wrote that by promoting larger families, the state was, in effect, trying to “exploit the unpaid labour of women”. The government has made no effort to encourage men

to spend more time with their children.

The Communist Party is in denial. It does not admit that its coercive efforts have been misguided since the one-child policy was launched in 1979. Most of the fall in the fertility rate has been caused by urbanisation, education and the greater participation of women in the workforce. The same factors have caused similar declines in other countries with no brutally enforced birth quotas.

The party may not want to abolish caps immediately. To do so would be to acknowledge error. It would also make redundant many of the hundreds of thousands of people who work for the fertility-control apparatus. And maintaining a limit could help the party to justify some of its abuses in the far-western region of Xinjiang. Ethnic minorities there, most of whose members are Muslim, once had higher birth quotas. In 2017 the government began a campaign of forced abortions and sterilisations among Uyghurs, even targeting women within their quota. Birth rates in Xinjiang plunged. The party fears a surge of births of people whom it regards as potential troublemakers. ■

Infrastructure in Tibet

Fast track to the throne

Tibet will soon get a new railway line. Tourists will love it; India won't

AS BIRTHDAY PRESENTS go, a 435km railway line that is expected to open this month in Tibet will be among the most lavish. To seekers of high-altitude thrills, it is one that will be cherished. The 37bn-yuan (\$5.7bn) track extends from the region's capital Lhasa eastward to the city of Nyingchi, which is Tibetan for “Throne of the Sun”. It is the region's first electrified railway; its trains will be Tibet's fastest. Officials call it a gift for the Communist Party's 100th birthday, which will be officially celebrated on July 1st (see Chaguan).

But the new line is only part of what China calls the “project of the century”. This involves building Tibet's second rail link with China's interior at a total cost that state media say could be about ten times that of the Lhasa-Nyingchi stretch, with even greater engineering challenges yet to come. The section about to open was no pushover. Tunnels comprise nearly half of its length. Workers had to brave landslides, poisonous gas from broken rock, intense cold as well as an oxygen-starved atmosphere at more than 5,000 metres above sea level—roughly the altitude of Mount Everest's base camps. When completed in

2030, the railway will connect Lhasa with Chengdu, the capital of neighbouring Sichuan province. At a maximum speed of 160kph, the journey will take just 12 hours, a third of the time now required by road.

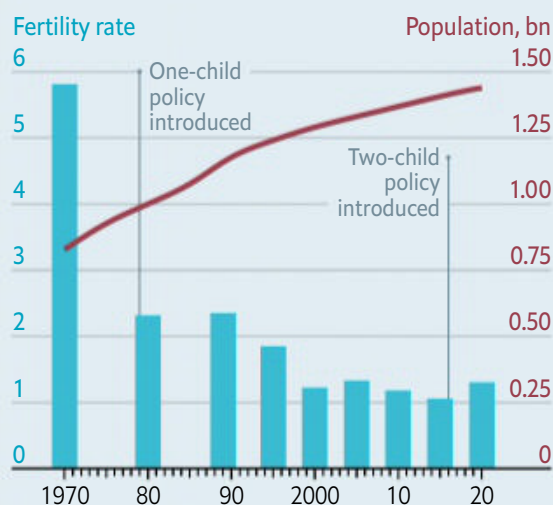
To the party, it appears no expense is too great in its campaign to integrate the vast, isolated region more closely with the interior. The first rail link, which opened in 2006, was also an engineering feat. Long lengths of that line from Qinghai province had to be laid over permafrost, using high-tech means to prevent temperature fluctuations from damaging the track.

The most obvious impact has been on tourism. In 2005 Tibet received fewer than 2m visits by tourists. By 2018 the number had soared to 33m trips (only 0.7% of them by foreigners). The government is aiming for 61m by 2025—about 17 times the number of Tibet's inhabitants. Some Tibetans worry their culture is being swamped. An influx of Han Chinese migrants, including shopkeepers and others cashing in on the tourism boom, may have fuelled ethnic tensions that caused an explosion of unrest in Lhasa and elsewhere across the Tibet plateau in 2008. Since then the government has clamped down even harder on dissent in the region.

Strategic thinkers in India worry, too. The new railway runs close to the Indian state of Arunachal Pradesh, which Chinese officials sometimes refer to as “south Tibet” and claim as Chinese territory. China's army swept into it during a brief but bloody border war in 1962, before pulling back again. India is annoyed enough by China's other big infrastructure project in the area: the damming of the Yarlung Tsangpo river (as it calls the upper reaches of the Brahmaputra), which the new railway crosses 16 times. It accuses China of threatening India's water security. There is little India can do. China is telling it “you are not in my league,” says Ashok Swain of Uppsala University. The trains will keep on running regardless of any complaints. ■



Go on, have another China



Chaguan | A century-old party woos the young

A new children's film about Zhou Enlai reveals a lot about Xi Jinping's China



COUNTRIES HAVE to make revealing choices as they craft patriotic messages for children. To put it kindly, young minds are tiny treasure-houses that deserve to be stocked with only a nation's most precious beliefs. To be more blunt, small children are easily distracted, so are best taught only a few important things.

It is therefore worth studying what China's propaganda chiefs have in store for youngsters this summer. As usual, June 1st was marked this year in China as International Children's Day, a festival of visits to museums, school picnics and wholesome games. A month later there will be a much larger event: celebrations on July 1st of the 100th anniversary of the party's founding in 1921.

China's leader, President Xi Jinping, is presented to the young as "Xi Dada", or "Uncle Xi", an austere but caring patriarch. Mr Xi stresses the importance of loyalty, which is why children's choirs are busy performing such songs as "Me and My Country" and "Follow the Leadership of the Communist Party of China". Party history is being used to inspire the masses. That explains reports of kindergarten pupils being dressed up in miniature combat fatigues and told to crawl on their bellies while clutching straw-wrapped "rations", to re-enact Red Army supply runs. There is much talk of China entering a "new era" of prosperity, national strength and global influence. It is not hard, as a result, to find children's drawings on public display, showing high-speed trains and space rockets adorned with Chinese flags. The young are urged to be proud of ancient glories too, as heirs to what they are told is the oldest continuous civilisation on Earth.

This year's Children's Day saw the release of a new patriotic film made especially for children. It depicts the pre-teenage life of Zhou Enlai, who was China's prime minister from 1949 until his death from cancer in 1976. This brilliant, disappointing man is a puzzle for historians. To this day, many Chinese revere Zhou as a moderate who tempered Mao's worst excesses, especially during the Cultural Revolution of 1966-76. Too often, alas, the record shows Zhou enabling Mao's follies and failing to defend close allies from political attack. Born in 1898 into a once-grand family of scholar-officials, Zhou was a precocious student of the classics. But his childhood was blighted by the deaths of his mother and adoptive mother and by money woes that, at the age of 12, forced

him to leave his birthplace, Huai'an, in the plains between the Yellow and Yangzi rivers, to seek a new life with an uncle in the north.

During the first decades of Communist rule, his privileged class background had to be explained away. A biography published in 1977, "The Early Life of Zhou Enlai" by Hu Hua, depicts Zhou as a "rebel against feudal society", who as a boy came to hate the gentry class into which he was born. Deepening poverty turned him into a "great proletarian revolutionary", it relates. That official history manages to praise Zhou's traditional education while reflecting the party's then-noisy disdain for pre-Communist codes of ethics, such as those taught by Confucius. Describing Zhou poring over books from his grandfather's library, Hu asserts that the boy was stirred by histories of "laudable national heroes" fighting foreign invaders, but was uninterested in Confucianism.

Biographies written in the 1990s by historians in the West, including Chae-Jin Lee, Barbara Barnouin and Yu Changgen, take a different view. They find that Zhou had a conventional Confucian education, which marked him for life. Nor do they agree that he was an angry rebel, noting his later, loving praise for his two mothers. Both were educated, tradition-minded daughters of scholar-officials. Indeed, they link Zhou's survival at Mao's side to a reverence for Confucian teachings about self-restraint and the need for officials to swallow small insults in the national interest.

The new film appears to agree. Chaguan watched "Zhou Enlai in his Childhood" on Children's Day in a cinema in Huai'an. The movie does not hide Zhou's ancestral wealth. It portrays him as a solemn little boy in a silk gown, visiting relatives in antique-filled mansions. Confucian customs are shown as expressions of love. The young Zhou kowtows to his elders and studies cobwebbed texts to make his dying mother proud. His adoptive mother teaches him to swallow an unjust punishment with tales of an ancient general who endured humiliations on his way to greatness.

The film is not fast-paced. There is much fidgeting in the cinema, though children perk up at a brief shot of a boy's bare bottom, and again when Zhou urges his adoptive mother to drink ink as a medicine. The Zhou family's struggles to afford a middle-class life are crafted to resonate with older cinema-goers. Zhou's father, a petty official in another town, is depicted as a migrant worker—largely absent, always fretting about money, and emotionally distant from his own son. The film shows health crises that wreck family finances and trigger rows about whether to spend money on medicine or school fees. Such dilemmas remain common today. The film's ending unites all ages. Over swelling chords, young Zhou waxes indignant on learning that Russia and Japan have taken territory from the ailing Chinese empire, then declares that he studies hard so that China may rise. That phrase of Zhou's is taught in schools to this day, and triggers murmurs of recognition.

Nationalism instead of class struggle

After the film, a mother in the audience, Lu Ye, calls it "very educational" to see the orphaned Zhou confront debt-collectors, endure hardships and assume responsibilities beyond his years. Ms Lu's 12-year-old son, Rongye, says that he "really liked" the film. He praises an episode in which Zhou picked and sold wild vegetables to help repay those debts, until his hands bled. "For the welfare of the family, he didn't care," Rongye notes approvingly.

The film-makers say that their aim is to promote education and family harmony. China is a deeply conservative place, even as it prepares to celebrate its revolutionary past. Chinese children, told constantly to be diligent and obedient, sensed that all along. ■



Post-pandemic governance

Defending the realm

The British state embraces a new era of drills, stockpiles and imagining the worst

THE BRITISH government thought its preparations for a pandemic to be among the best in the world. In 2016, 950 officials drilled for an outbreak of “swan flu”, a hypothetical illness which killed 400,000 people. It gave ministers some useful pointers on enlisting retired doctors and drafting emergency legislation.

Yet the planners did not prepare for a virus that could spread asymptotically. Since they did not imagine a national lockdown, no plans for a furlough scheme were drafted. The permanent secretary at the business department was not even aware the exercise had taken place. The planners fretted about how the public would react to mass burials and soldiers on the streets. The resulting report stayed secret. Dominic Cummings, Boris Johnson’s former aide, told MPs last month that when a pandemic actually struck, Whitehall froze.

Mr Johnson now wants to build a more muscular state, which intervenes in the market, and tells judges and museum curators what’s what. He wants it to be harder, too: less permeable to hostile states and

readier for emergencies. Successive governments have trimmed fat from public services, and chased foreign investment. Mr Johnson is twisting the dials back, from openness to guardedness, and from efficiency to resilience. Defence of the realm is the spirit of the age (see chart on the next page). Think-tanks that churned out papers on slimming the state under David Cameron, prime minister from 2010 to 2016, now bristle with ideas for how to toughen it up.

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40 Bagehot: Parallel societies

Read more from this week’s Britain section:
[Economist.com/Britain](https://www.economist.com/Britain)

Covid-19 is one factor; concerns over China another. Brexit has shaken old certainties. Ministers are spooked by French sabre-rattling over electricity supplies in fishing negotiations. “For a long time we thought it was the ‘end of history,’” says Alan Mendoza of the Henry Jackson Society, a security-policy think-tank attuned to the government’s thinking. “We didn’t realise the system was being challenged on such a dramatic scale by others.”

Risk will be weighed differently. Since its creation in 2001, the Civil Contingencies Secretariat, Britain’s emergency-planning unit, has focused on likely emergencies, such as terrorist attacks and flooding. In future, it will prepare more for the improbable yet catastrophic, such as nuclear accidents, and crises unfolding simultaneously. Ministers plan a whizzy “situation centre”, bristling with data feeds.

Health policy will look more like counter-terrorism. England’s sluggish public-health agency has been broken up and replaced by a new body focused on epidemics and other emergencies. The new Joint Biosecurity Centre, which scans for outbreaks, has been built by securocrats and is modelled on Britain’s terrorism-analysis centre. The government wants PPE to be made in Britain, breaking its reliance on China. A new state vaccine factory is due to open in the autumn.

Britons, it turned out, didn’t panic, and will be expected to continue to do their bit. The “integrated review” of Britain’s de- ▶▶

► fence and foreign policy published in March advocated a Scandinavian-style “whole-of-society” posture. Penny Mordaunt, a minister responsible for civil contingencies and co-author of “Greater: Britain after the storm”, wants the state to harness those who volunteered to battle coronavirus, directing them towards “national missions”, such as elderly care. Ministers plan to overhaul military reserves, and create a new cadre of civilian reservists, such as retired doctors and civil servants, who can be mobilised in crises. It is a radical shift, says Elisabeth Braw of the American Enterprise Institute, a think-tank, from the prevailing idea of government as “an umbrella that spreads across society, so the rest of us don’t have to do anything”.

Britain can only continue to be open, officials argue, if it is more secure against hostile states. A toughened foreign-investment screening law came into force in April. Ministers plan powers to block stock-exchange listings on national-security grounds, and to shield university research from espionage. The Home Office intends to modernise the Official Secrets Act, and to adopt an American-style register of lobbyists and ad men acting for foreign interests. Last year the government acknowledged the existence of JSTAT, a Whitehall body monitoring hostile states.

Most of these grand plans still have to be implemented, and the culture of Whitehall does not encourage crisis planning. Ministers churn through departments. The government has never held so much data, yet ministers say they feel in the dark about threats. Ms Mordaunt thinks they need mandatory crisis-training, and Whitehall rigorous and regular exercises.

At the moment, risks are divvied up among departments, and those that are not in charge often do little—thus the Department for Education had no plans for home schooling when the pandemic hit. Plans are not scrutinised by MPs, or external watchdogs. The answer, says Sir David Lidington, a former cabinet office minister, is greater pressure from the prime minis-

ter, and binding targets for improving resilience. “If you don’t get a clear direction from the most senior political level, inertia creeps in,” he says.

A more resilient state will be expensive, at a time when money will be tight. The trajectory for the public finances is uncertain, and Rishi Sunak, the chancellor, has already pencilled in further cuts to all departments other than health, schooling and defence. Mr Johnson has other priorities, including busting a backlog in courts and hospitals, and “levelling up” poor towns. Greater restrictions on foreign investment will mean lower tax revenues, and paying

more for infrastructure.

Mr Cameron’s years of austerity left public services less able to handle covid-19. PPE stockpiles dwindled and municipal emergency-planning budgets were cut by 35% in a decade. Britain has fewer hospital beds than France and Germany per person. Ministers face difficult choices, say officials, over whether to direct spending to new projects or to put “contingent capability” (ie, slack) back into the system. That sort of capability was once hard to justify, but crisis has revived an old idea of the state; one that fears the worst, and attends to the just-in-case. ■

Horticulture

Turf wars

The fight to define the great British garden

IN GARDENS across Britain the grass has stopped growing. They are not parched or drought-stricken. In fact, they are greener and more immaculate than before. That is because the lawns are actually synthetic substitutes made from thermoplastic polymers.

Britons are fascinated by lawns. Country estates have long competed to have the most perfectly manicured grassland. “What you’re saying in big loud capital letters, is ‘I’m so flipping wealthy,’” says Fiona Davison of the Royal Horticultural Society (RHS). With the advent of the lawnmower in 1830, the middle classes joined the fun.

But now Britons have fallen in love with artificial grass. Evergreens UK, which sells the stuff, says it has seen a 120% rise in sales since 2015. Grass Direct reports they are up by 50% this year. Betap, a Dutch firm, has launched its first British designs. These match different regions: Scottish turf is darker than Cornish turf.

Artificial grass is popular with families who have children or dogs and don’t want mud traipsed through their houses. It has a glamour factor, too. Andy Driver of Evergreens UK says people now see gardens as “outside rooms”—pairing carpets of artificial turf with elaborate decked seating and hot tubs.

Not everyone is a fan. Artificial grasses contain microplastics that ruin soil, impede drainage and risk flooding. A study finds earthworms gain 14% less body weight when operating under crumb rubber, a form of artificial grass. That might not be a problem for its fans, as worm holes are a regular nuisance, but it dismays green types. Extinction Rebellion dug up artificial turf outside a church in Harrogate in protest.



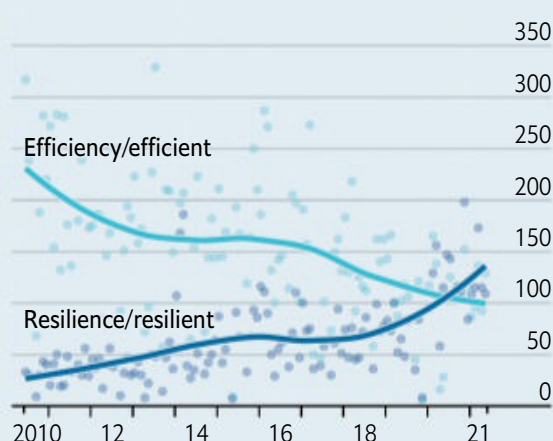
Preparing the battlefield

Ms Davison says a rival tribe of wildlife-loving gardeners is blooming, many having caught the bug during covid-19 lockdowns. Jack Wallington, a landscape designer, says they like things less manicured and try “to capture that wild element”. These eco-gardeners are influenced by rewilding projects and are more likely to be environmentalists.

Three petitions have tried to stop artificial grass spreading. The government says regulating what people do in their backyards is wrong. The RHS is concerned about artificial grass, but prefers persuasion to legislation. “Like Mao we say ‘Let a hundred flowers bloom,’” says Ms Davison. The Hundred Flowers Campaign, where Chinese people could openly criticise the Communist Party, preceded an ideological crack-down. Britain’s earthworms may be hoping that the RHS’s vanguardists manage the same.

Hard talk

Britain, use of words in parliamentary debates



Source: Hansard

Bagehot | Tolerating intolerance

A parallel society is developing in parts of Muslim Britain



BRITAIN HAS a glorious tradition of writers getting on their bikes, real or metaphorical, and peddling off to discover the country. Two of the best examples of the genre were published during the Great Depression, J.B. Priestley's "English Journey" (1934) and George Orwell's "The Road to Wigan Pier" (1937). Bill Bryson had such a hit with "Notes from a Small Island" (1995), selling more than 2m copies, that he decided to repeat the exercise with "The Road to Little Dribbling" 20 years later.

Ed Husain's new book, "Among the Mosques", is a fascinating addition to this tradition, taking readers inside religious institutions that most non-Muslims only experience as domes on the horizon. The country's first two mosques were founded in Liverpool in 1887, in a terraced house, and in Woking in 1889, on a grander scale. There are now almost 2,000 serving a Muslim population of more than 3m. Some heavily Muslim areas such as Blackburn's Bastwell district have several in the same street. But what goes on inside? And what is their relationship with wider society?

Mr Husain is the ideal man to answer these questions. The son of an Indian father and a mother who migrated from what is today Bangladesh, he won a prize for reciting the Koran as a child and spent much of his 20s in the Middle East perfecting his Arabic. He has written two books on Islam and has a broad intellectual hinterland. He wrote a PhD thesis under the supervision of the conservative British philosopher, Roger Scruton, and has worked for a number of think-tanks including the Council on Foreign Relations in America.

Mr Husain discovered much to be pleased about. Britain has absorbed a big Muslim population better than its ancient foe, France. On May 6th London re-elected its first Muslim mayor, Labour's Sadiq Khan. Several young politicians such as Naz Shah, MP for Bradford West, represent the modern face of the religion.

There is also a darker story. The British establishment that presided over the immigration which followed the second world war expected Islamic migrants to melt into wider society and relax their religious views. But in parts of the country Muslim communities are distancing themselves from wider British society and adopting stricter versions of their faith.

This is particularly true in the old mill towns of Yorkshire and

Lancashire, which now contain parallel societies, where the faithful can live their day-to-day lives without mixing. Mosques run schools and pronounce on Islamic law. Restaurants offer gender segregation under the polite name of "family seating".

These societies are dominated by a clerical class that extends its influence into secular society by, for example, endorsing candidates for Parliament. Mr Husain visited mosque after mosque that taught a highly literal interpretation of Islam, sometimes clinging to arguments that are being dropped in the Middle East. He saw shops displaying books that advocate stoning gays or keeping wives in purdah or waging jihad. Sayyid Qutb, Osama bin Laden's favourite philosopher, appeared often.

Many of these clerics belong to religious groupings with roots far from these shores. Saudi Wahhabis pour money into British mosques and offer all-expenses-paid scholarships to young British Muslims. More surprising is the importance of the Deobandis. Mr Husain claims more than half of the country's mosques now belong to the movement, which began in India and seeks to rebuild the caliphate from the ground up, convert by convert. Dewsbury, a historic market town in Yorkshire, is the European capital of the largest Muslim organisation in the world, the Tableeghi Jamaat, the movement's evangelical arm.

Why does this matter? Religious minorities have always clung together, the better to preserve their faith. Look at the Quakers during the Industrial Revolution or Orthodox Jews in Manchester or London today. Isn't "a parallel society" just a derogatory name for a flourishing subculture? And isn't the Catholic church also an example of foreign influence? It is no business of the state to make windows into people's souls.

There are nevertheless good reasons to be worried. One is the paradox of toleration. There are limits to how much liberal societies can tolerate people who call for gays to be stoned or who denounce Ms Shah as "a dog" because she fails to wear a hijab. The radicalised version of Islam being preached by clerics not only promotes intolerance but also fosters extremism.

A second is the paradox of diversity. The welfare state that liberals hold dear depends for its legitimacy on people feeling that they have a common identity. Robert Putnam, a Harvard sociologist, has demonstrated that support for the provision of public goods falls sharply if people think that the recipients are strikingly different from them. It is hard to be more strikingly different than the parallel communities of Dewsbury and Bradford.

State failure

The third is more practical. Britain is witnessing a struggle for the soul of Islam. But the state has repeatedly acted as if it is on the side of the forces of reaction rather than those of enlightenment. It has kowtowed to self-proclaimed community leaders, mistaking hardline beliefs for "authenticity". It has tolerated schools such as Darul Uloom, in Rochdale, that combines GCSE instruction with requiring students to memorise the Hadiths, including ones about beating wives and stoning homosexuals. And it has failed to make a compelling case for Britishness. Mr Husain points out that many Muslim children get a warts-and-all account of British history from their schools, while hearing constant praise for Turkey and Saudi Arabia in their madrassas. The trauma of Brexit has created a palpable desire to cure many of the social and geographic divisions that threaten to divide the country into warring tribes. Mr Husain makes a compelling case that that quest should not ignore the world of the mosque. ■

The
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REPORT:**

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On the brink





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The captain and his country

Brazil is backsliding. Jair Bolsonaro and covid-19 are but the latest in a decade of disasters, argues Sarah Maslin

ONE DAY in April, as Brazilian hospitals ran out of oxygen and 3,000 people a day were dying from covid-19, Jair Bolsonaro's 64-year-old chief of staff, Luiz Eduardo Ramos, got jabbed. It was his turn but he went in secret. His boss is anti-vaccine. When asked why Brazil was blocking approval for the Pfizer vaccine, the president joked that jabs turn people into crocodiles.

That Mr Ramos, a four-star general who once commanded peacekeeping troops in Haiti, had to sneak off reveals the depths to which Brazil has fallen under Mr Bolsonaro, whose career as an army captain stood out only when he was jailed for insubordination. Mr Ramos confessed his jab in a meeting he didn't know was being broadcast. "Like every human being, I want to live," he said.

Before the pandemic, Brazil was suffering from a decade of political and economic ailments. With Mr Bolsonaro as its doctor, it is now in a coma. More than 87,000 Brazilians died from covid-19 in April, the worst monthly death toll in the world at the time. Vaccines are so scarce that people under 60 will not get them until September. And a record 14.4% of workers are unemployed.

Yet on May 1st *bolsonaristas* draped in Brazilian flags took to the streets. Unfazed by a parliamentary commission of inquiry (CPI) into the president's handling of covid-19, they applauded his refusal to wear a mask, his support for hydroxychloroquine and his wish to send the army to obstruct stay-at-home orders. Fans in São Paulo begged for "military intervention". One woman told a visitor that Brazil had never had a civil war. "It's about time," she said.

Swap Portuguese for English and green and yellow for red, white and blue, and the rally could have been in the United States last year. Mr Bolsonaro borrowed heavily from Donald Trump's tactics to win election in 2018: populism, nationalism, chauvinism and fake news. Brazil was traumatised from corruption, recession, worsening public services and violent crime. Brazilians were fed up with politicians who had failed to solve these problems. Mr Bolsonaro channelled their frustration.

He portrayed himself as an outsider even though he had spent 27 years as a backbench congressman, making news only when he said something offensive about women, indigenous people or gays. A fan of the military dictatorship of 1964-85, he often posed with his thumbs and forefingers cocked as if he were shooting a machinegun. Once in office, he aimed it straight at Brazil's democratic institutions.

Good times, bad times

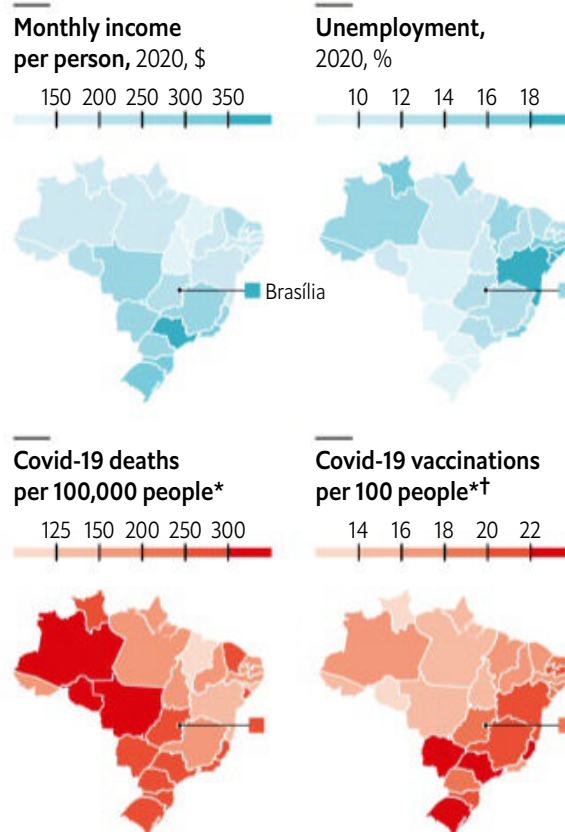
Ten years ago, Mr Bolsonaro's election would have been unthinkable. After the dictatorship Brazil reformed itself. A constitution signed in 1988 created independent institutions. A new currency in 1994 tamed inflation. A commodity boom in the 2000s brought jobs. With cash in their wallets, Brazilians saw their lives improve. Under the presidency of Luiz Inácio Lula da Silva, Brazil joined Russia, India and China in the BRIC bloc of fast-growing emerging economies. It led climate talks and was awarded both the 2014 ▶▶

A multi-dimensional country

Brazil



*To May 23rd 2021 †At least one dose
Sources: IBGE; Ministry of Health; TerraBrasilis



► football World Cup and the 2016 Olympic games.

Then the commodity boom ended. Protests in 2013 over a rise in bus fares turned into protests aimed at bringing down the left-wing Workers' Party (PT) government. An anti-corruption probe launched in 2014, known as Lava Jato (Car Wash), found that dozens of companies had paid bribes to politicians in exchange for contracts with Petrobras, the state oil firm. The economy crashed after irresponsible spending by Lula's successor, Dilma Rousseff. Bigger, angrier demonstrations led to Ms Rousseff's impeachment in 2016. Her replacement, Michel Temer, was accused of graft and barely escaped impeachment in 2017.

Mr Bolsonaro's election followed these traumas. He had little funding or airtime, but was boosted when he was stabbed while campaigning. Casting himself as Brazil's saviour, he won 55% of the vote. His support was highest in the south and south-east, the richest and whitest regions, and among conservatives like farmers and evangelicals. Millions backed him out of anger at the PT. Mr Bolsonaro seemed to many voters to be the lesser of two evils.

Many pundits said that Brazil's institutions would withstand his authoritarian instincts. So far they have proved right. Although Mr Bolsonaro says it would be easy to carry out a coup, he has not done it. But in a broader sense, the pundits were wrong. His first 29 months in office have shown that Brazil's institutions are not as strong as was thought, and they have weakened under his battering. Cláudio Couto, a political scientist at Fundação Getúlio Vargas, a university in São Paulo, likens them to brakes on a car hurtling down a hill. "If pushed too hard they can fail," he says.

Take the judiciary. Lava Jato seemed the triumph of the decade. Brazilians hoped anti-corruption reforms would usher in cleaner lawmakers who would act for the people not themselves. But some Lava Jato prosecutors and judges had a political agenda. This paved the way for Mr Bolsonaro, in the face of allegations against his sons, to shut down the investigation. Its

Mr Bolsonaro seemed to many voters to be the lesser of two evils

closure helped not only corrupt politicians, but also organised-crime groups.

The economy badly needs reforms to curb the growth of public spending, boost competitiveness and tackle inequality. As a candidate, Mr Bolsonaro briefly professed belief in liberal economics. He hired Paulo Guedes, a free-marketeer educated at the University of Chicago, as economy minister. Then he abandoned both, refusing to back changes that might cost votes. After a pensions revamp in 2019, Mr Guedes's reform agenda stalled. Six of the ten members of his economic "dream team" have quit or been fired.

The pandemic has wiped out all net jobs created since the recession of 2014-16, sending millions of people back into poverty. None of Mr Bolsonaro's four education ministers created a workable distance-learning system. One lasted just five days before he was found to have padded his résumé with fake degrees from Argentina and Germany. Some 35m children have been out of school for 15 months, a drag on social mobility for years to come.

In politics "the promise of renewal was a big lie," says Mr Couto. In 2018 voters kicked out much of the traditional political class. For the first time Congress has more novices than incumbents. A tiny group committed to fiscal responsibility and other reforms offers hope for the future. But most politicians remain gluttons of pork and patronage. After denouncing the system, Mr Bolsonaro joined it to save himself from over 100 impeachment petitions.

He has done most damage to the Amazon rainforest, which in Brazil now emits more carbon than it stores because of climate change and deforestation. The president does not believe in the first and sympathises with those doing the second: loggers, miners and ranchers. He took a chainsaw to the environment ministry, cutting its budget and forcing out competent staff. Reducing deforestation requires firmer policing and investment in economic alternatives. Neither looks likely.

At first covid-19 helped Mr Bolsonaro. Big spending on businesses and the poor distracted from his failure to pass fiscal reforms. His approval ratings briefly hit their highest since he took office. Last July he contracted covid-19 and recovered quickly, as he had promised he would. It seemed that the economy might do the same, paving the way for his re-election in 2022.

Then, in early 2021, Brazil was hit by a second wave with a more infectious variant from the Amazon city of Manaus. As social media filled with images of people in nearby Chile lining up for jabs, gravediggers in Brazil were busy. Mr Bolsonaro continued to rail against lockdowns and vaccines. In a cabinet shake-up he fired the defence minister, who had reportedly refused to pledge his loyalty. The heads of the three armed forces resigned in protest, briefly fuelling rumours of a coup.

It did not happen. Yet this special report argues that Brazil is facing its biggest crisis since the return to democracy in 1985. Its challenges are daunting: economic stagnation, political polarisation, environmental ruin, social regress and a covid-19 nightmare. And it has had to endure a president who is undermining government itself. His cronies have replaced career officials. His decrees have strained checks and balances everywhere. Consider *Diário Oficial da União*, where every legal change is published, says Lília Schwarcz, a historian. "There is a coup every day." ■

The economy

A dream deferred

After a generation of progress, social mobility is slowing

VINICIUS RABELO's grandparents were manioc farmers in the interior of Bahia. His parents moved to the city for a better life and, after opening a clothes shop, sent their children to private school. In 2018 Mr Rabelo started as an electrical mechanic in Camaçari, near the state capital, Salvador. Home to a petrochemical plant and a Ford factory, Camaçari had almost doubled in population over his lifetime. More than 40m Brazilians had joined an emerging middle class known as *Classe C*.

By the time he entered the workforce, the country was reeling from a recession that chopped 9% off GDP per head between 2014 and 2016. Unemployment stayed high and hundreds of factories closed. In January Ford said it was leaving. For 5,000 employees and tens of thousands of indirect workers, including Mr Rabelo, whose firm did safety checks, the job loss was compounded by a sense that social mobility had stopped. The 24-year-old, who has trendy glasses and an Apple Watch, now drives for Uber, "like 800 others who got laid off and had the exact same idea".

Under President Fernando Henrique Cardoso in the 1990s, Brazil's Real Plan ended hyperinflation, allowing Brazilians to start saving again. Under Lula in the 2000s, poverty fell by 41% thanks to a commodity boom, social programmes and rises in the minimum wage. The 2010s were meant to continue this progress. Instead it was a decade of bad policies and worse luck.

The PT, in power from 2003 to 2016, failed to build on its gains. Between 2003 and 2012, GDP growth averaged 4%. Informal working shrank and wages climbed. The government built thousands of schools, from crèches to universities. Bolsa Família, a cash-transfer programme, gave poor mothers a basic income. Light for All brought electricity to favelas and rural areas. Millions bought cars and took their first plane rides. Marcelo Neri, an economist, found that rising perceptions of well-being outpaced GDP growth as tangible changes made Brazilians feel better off than they really were. Between 2006 and 2009, Brazil moved up five places on a Gallup ranking of happiness, to 17th among 144 countries.

The optimism proved ephemeral. The PT did not invest enough in areas promising long-term productivity gains, like infrastructure. Despite expanded access to education (85% of pupils completed primary school in 2018, up from 50% in 2000), quality lagged behind. On the latest PISA tests of learning among 15-year-olds, Brazil came 57th out of 79 countries in reading. One analysis estimated that it would take 260 years to reach the OECD average. After 15 months without in-person classes, the outlook is worse. Some 15% of six- to 17-year-olds may have dropped out of school.

"We expected better," says Valterlinda Alves, a professor in Camaçari. For nearly a decade the economy was booming and the mayor, governor and president all came from the PT. But the best jobs at the petrochemical plant still went to workers from Salvador or São Paulo. In 2018 Ms Alves persuaded the Federal University of Bahia to open a campus in Camaçari, aimed at teaching STEM subjects to local students. After budget cuts its future is uncertain. Over the years, unions won pay bumps. Yet the median salary when Ford closed was only 3,800 reais (\$720) a month, three times the minimum wage. "Middle class in Brazil means just scraping by," says Jorge do Nascimento, a foreman.

Worse trouble hit when Lula gave up pro-business reforms and

Ms Rousseff launched an industrial policy redolent of import substitution. The development bank pumped subsidised loans worth up to 9% of GDP a year into favoured firms, while the finance ministry hid a growing deficit. The result was Brazil's worst-ever recession. It overlapped with Lava Jato, which dealt an extra blow in Camaçari, where affected firms like Petrobras and private construction companies employed thousands. Tax breaks worth billions of dollars no longer made up for low productivity and high costs. Ford's exit came after years of losses.

The protests in 2013 demanded even more subsidies. But as unrest continued, Brazilians seemed to conclude that the entire economy needed a revamp. In 2016 Congress impeached Ms Rousseff for breaking budget rules. Mr Temer, her successor, charged ahead with liberal reforms, slashing subsidised lending, creating a constitutional ceiling on spending and passing a labour reform to make contracts more flexible. All the frontrunners in the 2018 election (except for Fernando Haddad, who became the PT candidate after Lula was barred) talked of curbing public spending.

Soon after taking office in 2019, Mr Bolsonaro signed a pensions reform that will save 800bn reais over a decade. Mr Guedes bragged that reforms to simplify the tax code, slim down the public sector and privatise inefficient state firms would follow. Yet the reformist spirit proved fleeting. Mr Bolsonaro is not much of a liberal. His distaste for hard reforms made it easy for Congress to ignore the Guedes agenda.

Victories were smaller: a law opening sanitation to private investment, the sale of oil refineries and subsidiaries of state firms, a measure allowing a freeze of civil-service salaries when mandatory spending exceeds 95% of revenues. A trade deal between the European Union and the Mercosur bloc of South American countries stalled because of Mr Bolsonaro's environmental policies. Growth averaged just 1% a year between 2017 and 2019.

Enter covid-19

Covid-19 put an already troubled economy on life support. Healthcare and stimulus spending pushed public debt to a record 89% of GDP in 2020. Mr Guedes predicted that support to businesses and monthly payments to 68m informal workers would spur a "v-shaped recovery". But although poverty briefly dipped and a drop of GDP in 2020 by 4.1% was not as bad as feared, the second wave shut the economy again. GDP is expected to shrink in the second quarter of this year. Payments to the poor were slashed just as the pandemic worsened. Some 18m more people fell into poverty.

The future looks grim. Just 19% of Brazilians have been vaccinated, making a third wave quite possible. The currency has fallen by 25% against the dollar since covid-19 broke out. Inflation rose to ▶▶

Into the pit

Brazil



Sources: IMF; Refinitiv Datastream

*Estimate

► 7% in April. The central bank is raising interest rates for the first time since 2015. A poster campaign in São Paulo decried rising prices of food staples and blamed them on President “Bolsocaro”, a play on the Portuguese words for “pocket” and “expensive”.

Camaçari’s industrial sector sits on the outskirts of town, past tyre shops, big-box stores and the region’s first shopping mall. Its streets are ambitiously named: Benzene, Hydrogen, Oxygen. But its smokestacks are faded and its pipes rusty. The town centre is busier, but people are not buying much. Mothers with children stand in line to find out if they qualify for new emergency payments. One survey found that six out of ten Brazilians have reduced the quantity or quality of food they eat.

The mayor predicts that Ford’s closure will cost 15% of the city’s jobs. Ford employees will lose their private health insurance, which will strain public hospitals. Alan Lima, head of a network of private schools, says his enrolment has dropped from 2,000 to 1,250. “I look at yesterday, I look at today, and it’s starting to seem like yesterday was better than today,” says Ana Paula Luz, a mother of five who used to work on a motor assembly line. Some 65% of Brazilians think the economy will get worse, the highest proportion since the poll began in 1997.

There are glimmers of hope. Agriculture is booming, commodity prices are up again and Camaçari is becoming a logistics hub between Salvador and western Bahia. Mercado Libre, Latin America’s e-commerce giant, has opened a distribution centre nearby. Bahia is Brazil’s top source of wind power and turbines are made in Camaçari, though firms have hired technicians from India. Tourism is growing but cumbersome tax laws, licensing and labour rules make investors “think twice before opening a hotel,” says João Eça, head of a resort run by Tivoli, a Portuguese hotelier, on a beach near Camaçari.

To get back on track, Brazil must deal with old problems. Subsidies to industry and public servants are skewed to the well-off. Tax and labour laws distort or discourage investment. And 94% of the budget is eaten up by mandatory spending adjusted for inflation, leaving less and less for public investment and social programmes. Yet politicians drag their feet. Congress plans to split tax reform into several separate bills. In April it passed a budget exceeding the spending ceiling by 30bn reais, including 49bn reais-worth of pork for congressmen’s home states. Rather than trying to curb wasteful spending, politicians changed the constitution to exclude their projects from the fiscal rules. “Our idea of development continues to be that the state hands over money to build factories and create jobs,” says Marcos Lisboa of Insper, a business school in São Paulo.

Substantial reform is unlikely before the election in 2022. Brazil remains a closed economy, with red tape driving down growth and skewed spending driving up inequality. In 2019 the average income of the richest 1% was 33.7 times that of the poorest 50%, a ratio surpassed only in Qatar. A study by the OECD in 2018 found that it would take a Brazilian family from the poorest 10% of earners nine generations to reach the average income.

The risk is not Argentina-style default or Venezuela-style hyperinflation (most of Brazil’s debt is in its own currency). Instead, it is stagflation, or low growth, high unemployment and rising prices. Brazil is suffering a “confidence collapse”, declares Arminio Fraga, a former central-bank president. He once suggested reforms to save 9% of GDP: 3% from eliminating tax breaks, 3% from narrowing the gap between public- and private-sector pay, 3% from a second pensions reform. Now he says: “We keep looking for short cuts and magic tricks, but we’re not going anywhere until we get the political system in order.” ■

Corruption and crime

Sliding back

Revelations of graft have fuelled anti-establishmentism

IN 1969 A Bahian construction firm called Odebrecht began work on a brutalist building in Rio de Janeiro, which was to be the headquarters of Petrobras. It was an exciting moment: Petrobras had found oil off the coast and Odebrecht would become Brazil’s biggest contractor. But 45 years later came Lava Jato, when scores of businessmen were jailed, including Odebrecht’s boss.

Brazilian corruption has roots in a promiscuous relationship between the state and private firms. The dictatorship was Odebrecht’s chief customer. Norberto Odebrecht, its founder, saw corruption as a cost of doing business. He wrote in a bible for staff that the client is not “the state” or “the government”, but an individual to satisfy by any means necessary. Odebrecht’s “Department of Structured Operations”, better known as the bribes office, kept a list of code names for over 400 politicians and officials.

Many companies had similar practices. Odebrecht “played the game the best,” says Malu Gaspar, author of a book about the firm. The cost rose with the return of democracy, which brought a plethora of smaller parties, raising spending on political campaigns. Firms put up the cash, in under-the-table campaign donations. Odebrecht’s employees saw these as political contributions. “We knew that what we were doing wasn’t right but the feeling was that it was not that wrong,” says a former executive.

Some scandals were investigated, but most “ended in pizza”, as the Brazilian saying goes. Businessmen rarely received more than a fine. Politicians mostly escaped punishment. As the economy grew, so did graft. Shell companies and Swiss bank accounts mushroomed. The PT even helped Odebrecht win contracts abroad. The existence of this scheme was no surprise, says Sérgio Lazzarini, who wrote a book in 2010 about how firms won contracts by donating to political campaigns. “But no one imagined how bad it was.”

Lava Jato started with a money-laundering investigation of a petrol station in Brasília. New tools such as plea-bargaining and exchange of financial information with foreign authorities uncovered the Petrobras scheme. The scandal contributed to Ms Rousseff’s impeachment. The supreme court banned corporate donations to try to reduce the role of money in politics. Congress made it harder for smaller parties to leech off bigger ones.

Seventy-eight Odebrecht employees signed plea bargains, including the boss, Marcelo Odebrecht, who spent 30 months in jail. Their testimony led to charges against 95 politicians, including Lula, who was convicted of taking bribes. Companies scrambled to reassure shareholders that corruption would no longer be tolerated. “We built a compliance department from scratch,” says João Nogueira, who helped turn around Odebrecht.

Lava Jato prosecutors and Transparency International proposed ten anti-corruption measures to make it easier to prosecute white-collar crime. Many congressmen backed ending *foro privilegiado*, a legal right that says politicians can be investigated for corruption only by the supreme court. But Lava Jato made mistakes. First, prosecutors and the judge, Sergio Moro, cut corners. Many cases were thrown out for violating due process or for lack of evidence, and leaked messages revealed that Mr Moro was improperly coaching prosecutors. Second, some had partisan goals. Days before the election in 2018, Mr Moro released testimony against ►►

► Lula. Mr Bolsonaro's campaign was railing against corruption in the PT. The move seemed aimed at Mr Haddad, who lost in the second round. "Lava Jato is the mother and father of Bolsonaro," claims Gilmar Mendes, a supreme-court judge.

Mr Bolsonaro chose Mr Moro to be his justice minister. In an Oedipal twist, he then went on to destroy Lava Jato. The obvious reason is that his eldest son, Flávio, a senator, was charged for embezzling the salaries of his employees while a state deputy in Rio. His three other sons are also under investigation, for alleged crimes ranging from running a fake news network to receiving a car from a businessman seeking influence (all deny wrongdoing).

Mr Bolsonaro wants to wreck institutions, not reform them. During the campaign his son Eduardo, now a federal deputy, said that a "soldier and a corporal" would suffice to close the supreme court. In May 2020 Mr Bolsonaro almost ordered the army to do this when he heard that the court might allow police to seize another son's mobile phone. According to *Piauí*, an investigative magazine, generals in his cabinet talked him down. After Mr Bolsonaro fired the head of the Federal Police, Mr Moro quit, accusing the president of obstructing justice. This year, the attorney-general chosen by Mr Bolsonaro disbanded the Lava Jato task-force.

"If we were an institutionally mature country, we'd improve the model," says Mr Lazzarini. "Instead we throw it out." In April the supreme court annulled Lula's convictions because Mr Moro was biased. The ruling paves the way for him to run again for president in 2022, and perhaps for other politicians to have their cases annulled. The lower-house whip in Congress has suggested repealing a law against nepotism. New revelations that the development ministry provided 3bn reais for congressmen to buy tractors and other farm equipment at inflated prices undermine Mr Bolsonaro's claim that there have been no scandals since he took office.

The Petrobras building looks out on other landmarks that once seemed monuments to progress but have become symbols of graft. North is Maracanã stadium, tainted by charges that the ex-governor, Sérgio Cabral, pocketed 60m reais in the run-up to the 2014 World Cup. East is Guanabara Bay, due to be cleaned before the 2016 Olympics but still polluted, partly because of corruption.



Would you trust them?

Even the famous Christ the Redeemer statue was at risk of losing its arms before money was raised for repairs in 2015.

Something else towers over Rio's poorest residents: criminal mafias known as militias. These heavily armed groups of off-duty cops and other thugs thrive on poverty and state negligence. They are being strengthened by Mr Bolsonaro.

Shadow state

Lots of oil money may have sloshed around Rio, but little went to housing, transport or security for the *bairros* where waves of migrants from poorer states settled. Daniela (not her real name) moved to a favela called Rio das Pedras in 1997. Militias take pride in ridding favelas of drug dens and drug users. "There are things you have to pretend you don't see," she says, scrolling through photos of two smiling teenagers in sweatshirts and, a few frames later, the same boys in a pool of blood. Residents have no choice but to accept militias' rule. "They are the law," Daniela says.

They are also the internet provider, the cable company, the cooking-gas distributor and the ride-share service. Every business in Rio das Pedras pays "security tax", which is used to buy cars and guns and build illegal apartments. Deeds are handled by a dodgy neighbourhood association. This would not be possible without the blessing of the local police. "You don't build an apartment complex overnight," says Simone Sibilio, former head of the organised-crime unit at the state prosecutors' office.

In the past, politicians have condoned militias. In 2006 Rio's mayor called them a "lesser evil" than drug gangs. Flávio Bolsonaro gave a medal to Adriano Magalhães da Nóbrega, a police captain who prosecutors say ran a militia in Rio das Pedras and committed eight murders. Flávio employed his mother and ex-wife; they allegedly helped with his embezzlement. But the murder in 2018 of Marielle Franco, a city councilwoman who had denounced militias, woke people up. Two cops-turned-hitmen with ties to the Rio das Pedras militia were charged. After the investigation, Ms Sibilio and her colleagues launched "Operation Untouchables", aimed at the militia's economic activities. Mr Nóbrega fled before he could be arrested; he was killed in a police operation. Of the 62 alleged *milicianos* charged in the case, 15 are police officers. Many were jailed after a state parliamentary inquiry into militias in 2008 but freed after witnesses recanted or were killed.

If the state wants to tackle militias, says Ms Sibilio, it must do more to root out corrupt cops. Police, prosecutors and financial watchdogs must collaborate. But the pendulum is moving in the opposite direction. The former governor of Rio, Wilson Witzel, weakened internal control within the police before he was impeached for covid-related graft last year. The state prosecutors' office recently closed several workgroups for complex crimes, including one that was investigating illegal construction by the Rio das Pedras militia.

The media has pounced on links between militias and the Bolsonaro family, of which there are plenty. Mr Bolsonaro lived in the same gated community as one of Ms Franco's alleged killers; he appeared in a photo with the other. Such ties are hardly surprising considering the Bolsonaros' electoral base of cops and soldiers in western Rio.

"The president has a paramilitary ideology," says Bruno Paes Manso, author of a book about militias. Mr Bolsonaro says "An armed public will never be enslaved" and has tried to pass 31 changes making guns easier to own. Some but not all were suspended by the supreme court. The number of registered firearms has surged since 2017 by 66%, to over a million. Many more circulate illegally. Mr Bolsonaro's rhetoric is often geared to police and thugs. As a guest on a TV show before Brazil passed 400,000 deaths from covid-19, he held a sign that said *CPF cancelado* (tax number cancelled), a phrase used by police and militias when they kill. ■

The Amazon

Money trees

The Amazon and its residents need sustainable development

THE INDIGENOUS territory Sete de Setembro draws its name from the “first contact” with the Paiter Suruí tribe: September 7th 1969. At the time, tribe members thought white men, with their pale skin and strange beards, were a sort of monster, whereas the indigenous were “real people”, or *paiterey* in their tongue.

Cousins Almir and Henrique Suruí were born in the following decade. As boys they saw the arrival of thousands of settlers, the conversion of tracts of forest to farmland and the death of hundreds of Suruí from disease and violence. As men they became caciques. But their paths diverged in the mid-2000s. Almir tried to protect the forest and find a sustainable income for his village, Lapetanha, home to 115 of the tribe’s 1,500 members. Henrique got involved in illegal logging and mining, which led to his expulsion. He founded a village elsewhere in the territory, which spans nearly a thousand square miles in Rondônia and Mato Grosso.

Such rivalries reflect a double failure on the part of the government: to keep invaders off indigenous lands and to reduce the poverty driving people in the Amazon into illicit activities. Since 1969 the region’s population has quadrupled to nearly 25m. It comprises 60% of Brazil’s territory and 13% of its population but just 8% of GDP. The area richest in biodiversity and natural resources is among the least developed and most destitute.

The consensus is that environmental enforcement must go hand-in-hand with sustainable development. What that looks like is debated. Last year Mr Bolsonaro submitted a bill to legalise mining on indigenous land. “Every day the Indian is more of a human being,” he said. Many suspect the Indians are not his chief concern. His vision of big projects like highways and dams to serve farms and cities does not include them. His father was a miner. He has said it is “abusive” to non-indigenous Brazilians that less than 1% of Brazil’s population occupies 14% of its territory.

Polls find most Brazilians opposed to mining on indigenous land because it uproots trees, pollutes rivers and leaves huge pits behind. Their land needs more protection if it is to remain pristine. Satellite images of Rondônia show farmland dotted with dirt roads and tiny towns. The only remaining big patches of forest are indigenous territories. This makes tribes natural supporters of a “bioeconomy” that will save the forest and reduce poverty, say environmentalists. In 1997 Philip Fearnside, a Manaus-based biologist, wrote that “The mother lode waiting to be tapped is not a material commodity, but rather the forest’s environmental services.” Yet society has to work out how to pay people for protecting biodiversity, carbon storage and water cycles.

The problem is that, ever since the rubber boom in the late 1800s, wealth and employment in the region have come from extraction: logging, mining, farming. In the 1970s the military regime built thousands of kilometres of roads through the rainforest for these activities. Colonisation programmes lured more than 100,000 families to states like Rondônia with the promise of “land without men for men without land”. To gain a deed to a plot of jungle they had to deforest half. As with the “manifest destiny” that drew Americans west, there was no mention of tribes already living on the land. Many were massacred or driven out.

Brazil’s constitution of 1988 tried to put some of this right. It strengthened laws to protect the environment, laid out steps to



What men without land do for gold

demarcate hundreds of indigenous territories and boosted Funai, the agency responsible for them. It left open the possibility of extractive activities on indigenous land, so long as Congress passed laws regulating them and local communities were consulted and paid. Mr Bolsonaro says they will be if his bill passes, but his government has not sought their input.

In the 1980s Funai introduced logging as a source of income for the Suruí, but it was banned after it went out of control. The protectionism of later governments was also unhelpful. Rules making it hard for indigenous people to sell produce from their land to businesses outside the Amazon “made it impossible for them to develop,” says Ivaneide Cardozo of Kanindé, an NGO in Rondônia. In 2000 Almir wrote a 50-year plan with goals for health and education and ideas for how to pay for them. “We’re in the process of understanding what money means for us,” he says.

The road to Sete de Setembro weaves through rocky pastures filled with humped cattle. A wall of trees marks the entrance to the territory. Inside, the forest canopy blocks the sun and the air fills with bird sounds. Lapetanha has a *maloca*, where elders meet under a thatched-palm roof, along with a Wi-Fi tower. In 2013 the Suruí became the first indigenous group in the world to sell carbon credits under the UN’s anti-deforestation scheme (REDD+). Natura, a cosmetics company, bought 120,000. So did FIFA before the World Cup. The tribe received around 3m reais to protect trees, and used it for projects such as a coffee co-operative.

But some tribe members claimed the money was not distributed fairly. Henrique claims Almir took too much. The scheme could have won more funding but, with help from an NGO tied to the Catholic church, which has criticised carbon credits, Henrique sabotaged it. During an audit to vet his claims, loggers returned. The project was decertified. REDD+ projects are now popping up throughout the Amazon in hopes of a global carbon market, but ►►



► the Suruí case suggests that it may not be a straightforward success. And rich countries may prefer to buy credits at home. “Sending money to Brazil to stop deforestation doesn’t do anything for the German economy,” Mr Fearnside says.

The co-operative did better. Brazil’s largest coffee firm, Três Corações, agreed to buy each harvest for 450 reais a sack (the co-op takes 20%). Each Suruí family sells 30-40 sacks, depending on its plot and how many kids it has to pick berries. It is a lot of work for an income less than minimum wage. But the Amazon lacks initiatives for more lucrative economies, like pharmaceuticals or cosmetics, says Denis Minev, who runs its largest department-store chain. He points out that the government invested billions to help Petrobras develop pre-salt technology, and the Embrapa agricultural-research institute to grow soy in the *cerrado*. The annual budget for the top research institute in the Amazon is 35m reais, less than the footballer Neymar earns in a month.

Francisco Costa, an economist, says that 700,000 people still make a living from the forest, a sizeable group but one with an uncertain future. They are responsible for less than 5% of deforestation; most comes from soy and cattle farms, which are expanding (mining causes degradation, a precursor). Farmers make more money from the growing market for beef and soy in Asia, while Amazonians in sustainable trades like fishing or harvesting açaí have seen their incomes stagnate. It is no wonder that some are turning to illegal economic activities.

Before diamonds were discovered on Suruí land, they were mined on a nearby reserve occupied by the Cinta Larga tribe. *Garimpo* (wildcat mining) brought wealth but also alcoholism, prostitution and debt.

Environmental enforcement must go hand-in-hand with sustainable development

In 2004 the Cinta Larga killed 29 *garimpeiros*. Prospectors fled to other areas; mineral veins led them to Sete de Setembro. Almir forbade the Suruí from mining but Henrique gave them his blessing: “If the forest is going to be cut down, at least let it be by Indians.”

According to a verbal agreement, 20% of profits are meant to go to the tribe, yet miners rarely keep their word. Henrique was once jailed for mining but he has been to the police countless times to report that Suruí are being exploited. At a hearing in 2015, he accused prosecutors and Funai of being complicit. “You’re in the hands of the miners and I’m the one who’s the thief,” he said. Three or four times a year, police descend on the mines, arrest the miners and set fire to their machines, which can cost 500,000 reais. But the *garimpeiros* always return. Some 200 are in Sete de Setembro even now, says an investigator. Fines are low, “So it’s always worth it to try again. Coffee, Brazil nuts? Nothing is capable of competing with diamonds.”

Burn, baby, burn

Mr Bolsonaro has squelched any initiatives that tried. In 2019 the environment minister, Ricardo Salles, launched a crusade against the Amazon Fund, through which Germany and Norway donated \$1.2bn to projects that employ locals to protect the forest. Mr Salles accused NGOs of committing fraud, even though most of the money went to the ministry. He abolished two committees that oversaw funding and suggested using it to pay squatters who were kicked off conservation units. In the face of rising deforestation and fires, Germany and Norway withdrew their donations.

In a secret meeting in April 2020, video of which was released by the supreme court, Mr Salles urged cabinet members to “push through all kinds of deregulation” while the press was distracted by covid-19. A day after telling President Joe Biden and other leaders at this year’s Earth Day summit that Brazil would double spending on environmental enforcement, Mr Bolsonaro signed a budget that cut it by 24%. When a police superintendent accused Mr Salles of obstructing a probe into illegal logging, he was fired. Brazil will have no problem meeting its goal of ending illegal deforestation by 2030, the former chief tweeted, “Because there will be no forest left.” Mr Salles is under investigation for corruption.

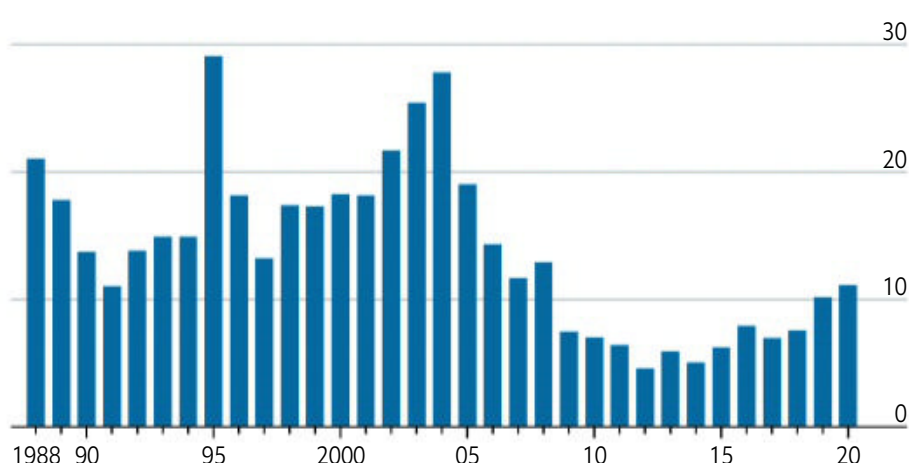
As the risk goes down, the reward goes up. The price of gold has soared by 40% since 2018, to more than \$1,700 per ounce. This has drawn tens of thousands of hopefuls to wildcat mines. A gold rush in Pará has split the Mundurucu tribe and led to violence. Near the border with Venezuela, where the Yanomami tribe lives in isolation, 21 of its members died of covid-19, including six babies. The virus was brought in by *garimpeiros*. Instituto Escolhas, another NGO, says lack of regulation makes *garimpo* far too easy. To sell gold to a bank, Brazilians need only fill out a form. The institute estimates that a third of the roughly 100 tonnes of gold mined in Brazil each year comes from *garimpo*. Most is illegal.

Over 3,000 petitions have been filed to mine on indigenous land. Mr Bolsonaro’s government has approved 58, even though the law does not allow it. The permits mostly belong to big companies like Anglo American, though *garimpeiros* believe it is a matter of time before their trade is condoned. “We’re workers, not bums,” says Alison Oliveira, owner of one of more than 1,000 illegal barges that mine gold on the Madeira river outside Porto Velho, Rondônia’s capital. By night they dredge sand from the riverbed; by day, they sift through it with mercury, which sticks to gold. On a good week, the flecks add up to an ounce or two.

In January Rondônia passed a decree overturning a ban on *garimpo* in rivers. Few barges have submitted papers to operate legally (it is easier to bribe the marine force), but they see the decree as a step towards access to conservation areas where mining remains illegal. Porto Velho’s economy depends on gold, says Mr Oliveira. That politicians own barges is an open secret. He insists that min- ►

The wrong direction

Brazil, annual deforestation of the Amazon rainforest, '000 km²



Source: TerraBrasilis

ers have become more green-conscious: they now throw their rubbish away in town. Sand tainted with mercury goes back into the river, though. When this correspondent visited, his workers were dumping it as dolphins played near the barge.

Henrique Suruí scrolls through photos on his phone of chemical-filled craters and laments that young Suruí women want to marry only white miners. He feels sick when he thinks about how little the tribe has benefited from *garimpo*. “Bolsonaro is right when he says indigenous people need to evolve,” he says. Almir agrees. The death of both their mothers from covid-19 has reunited the cousins. They are talking of joining forces to kick out the miners and launch a new carbon-credit project. Henrique wants to find investors for a mine in which more profits would go to indigenous people. Almir is sceptical but doesn’t rule it out. “Of course we want development,” he says. “Just not at any cost.” ■

Politics

In need of reform

Brasília is full of new politicians and old ideas

TABATA AMARAL wanted to be an astrophysicist, not a politician. She was raised in the outskirts of São Paulo and graduated from Harvard in 2016. On her return she saw the sorry state of education in Brazil and decided only policy change would improve it. So she launched a bid for Congress and became a federal deputy at 24. On her first day in Brasília in 2019, she learned why change is so hard. The son of another congressman was squatting in her state apartment and refused to leave. Politicians get lots of perks: a salary of 405,000 reais, 25 advisers of their choice, free housing, and *foro privilegiado*, which makes them hard to punish. Parties are given 2bn reais between them to run campaigns. State-sized districts require big spending, so rich political clans usually win. In exchange for their support, the president doles out jobs and pork.

Some young politicians want change. After Lava Jato Ms Amaral founded Acredito (I believe), a movement that preaches “renewal of people, practices and principles”. She also joined Renovabr, a public-policy bootcamp founded by Eduardo Mufarej, a businessman, that trained 117 candidates before the 2018 election, of whom 17 were elected. Members of Renovabr represent parties

across the ideological spectrum and don’t always obey party instructions. Ms Amaral was nearly kicked out of the centre-left Democratic Labour Party for voting for pension reform.

“Every politician has to choose whether to work for the inside or the outside,” she says. Ms Amaral and two other congressmen cut costs by sharing staff. Their “shared cabinet” was the first to propose a basic income for the poor during the pandemic. Veteran politicians now use social media. “It was as if the public didn’t exist and now it does,” says Fernando Henrique Cardoso, a former president. The internet may spur more change than the modest reforms agreed on so far, such as a “clean record” law barring candidates with graft convictions for eight years and a “performance clause” denying funds to parties with less than 3% of the vote.

Deeper reforms might include smaller districts, stricter campaign-financing rules and admitting independent candidates. But none looks likely. Although voters in 2018 elected a record number of first-timers, most were “new politicians with old ideas,” says Joênia Wapixana, the first indigenous congresswoman. Politicians back the system that put them in power. That was clear when they refused to give up pork in the budget even though it meant cuts to health and education. Deputies may even support a bill to increase their terms from four to five years and to bring back corporate campaign donations.

Mr Bolsonaro’s vows of renewal have also proved false. “In 2018 it was a decision between something we knew had brought the country to its knees and something we didn’t know,” says Mr Mufarej. That was a “collective mistake”. Disillusion increased when the president squandered chances to buy vaccines. A Pfizer executive told the CPI that Mr Bolsonaro ignored six offers from the company. His approval rating fell from over 40% in August to less than 30%. But Congress has ignored 111 impeachment petitions against Mr Bolsonaro. Before Ms Rousseff was impeached, she faced months of protests and her support slumped to 9%.

The CPI will give Mr Bolsonaro’s opponents ammunition for the election next year. The battle will be fought by traditional politicians. His top rival is Lula, who wants to remind Brazilians how good things were when he was president. “Poor people travelled in aeroplanes and were proud to eat meat on Sundays,” he tells *The Economist*. “Now they are going hungry.” Yet Lula’s negative ratings are nearly as high as Mr Bolsonaro’s. Many Brazilians have not forgiven him for the PT’s role in corruption. He suggests that prosecutors in the United States collaborated with Lava Jato because of “an interest in our Petrobras”. He admits that the PT lost in 2018 because of “errors we committed”, but says they were economic, not ethical. With growth stagnant unemployment soaring, “the role of government is to put money on the table,” he says.

If the election were held today, the most likely outcome would be a runoff between Lula and Mr Bolsonaro. Some of Lula’s critics would hold their noses and vote for him. “At least the PT is on the democratic spectrum,” says Mr Cardoso, whose Party of Brazilian Social Democracy was long its biggest rival. Centrist parties are scrambling to find an alternative. “Lula and Bolsonaro see the country in the rear-view mirror,” says Luciano Huck, a TV host who may run. Other options include João Doria, governor of São Paulo, and Ciro Gomes, a former governor who came third in 2018. But if more than one runs, they could split the centrist vote.

Trouble ahead?

If Mr Bolsonaro loses, there may be protests. The ex-foreign minister called those who disputed Mr Trump’s loss “good citizens”. In any *bolsonarista* uprising, some Brazilian police might join in. As for the army, it could split the ranks, says a former officer. That is what happened in 1964. The coup against João Goulart, a populist president, was widely supported by Brazilians hopeful that democracy would soon return. The generals ruled for 21 years. ►►

► Carlos Alberto Santos Cruz, Mr Bolsonaro's former chief of staff, insists today's generals are committed to democracy. Those in the cabinet joined as citizens, not soldiers, he says. Still, he admits the 6,000-odd soldiers in government jobs leave the impression "that the military is participating." Many may want Mr Bolsonaro to stay, including Eduardo Pazuello, a former health minister under scrutiny by the CPI for ignoring pleas from Manaus before hospitals ran out of oxygen in January. The army despises the PT for its role in corruption and for creating a truth commission to investigate human-rights abuses under the dictatorship. In 2018, before the supreme court rejected an appeal to save Lula from prison, the army commander tweeted that his institution was "on the alert" and "shares the desire of all good citizens to repudiate impu-

nity". It was perceived by many as a warning.

Mr Bolsonaro calls the armed forces "my army". He says he could order them to open businesses that governors have shut because of the pandemic. The recent resignation of senior commanders suggests they might reject such orders, but Mr Bolsonaro is trying to make them more loyal, says Antonio Ramalho, a professor of international relations at the University of Brasília. Soldiers have had wage increases and been spared the deepest pension cuts. In February the president tried unsuccessfully to award Mr Pazuello a fourth star. Changing promotion rules so that younger officers can advance quickly is a tactic that worked well for Hugo Chávez in Venezuela. "People underestimated Bolsonaro," Mr Ramalho says. "He's thinking ahead." ■

Of Bibles and ballots

Evangelical churches are political actors in Brazil

AT 4PM EVERY Sunday in Barra de Pojuca, a poor town in Bahia, the streets suddenly empty. You may think people are taking a siesta, until you spot the crowded churches. "For every sister in church there's a brother in the bar," jokes Cremilda, a member of the Assemblies of God, as she climbs to the cinderblock chapel. But in the 20 years since she helped build the church, more men are choosing Bibles over beers.

In 1970 only 5% of Brazilians were evangelical. Now a third are. The movement owes its growth to rapid urbanisation. Pastors arrived with little more than a Bible and preached in words people understood. Pentecostalism offered lively worship and solutions to earthly problems like poverty, alcohol abuse or domestic violence. A study of Brazilian men in 2014 found that Protestant faith was linked to a rise in earnings, especially among less educated black men. "Becoming evangelical isn't only a bet on the supernatural, but a choice" for a better life, writes Juliano Spyer, an anthropologist, in a new book.

The largest subset of evangelicals are poor black women, a group Mr Bolsonaro has derided. Yet two-thirds of evangelicals voted for him, many on advice from their pastors. Evangelical churches once shied away from politics. Their representatives at Brazil's constitutional convention in 1988 urged Catholics to keep the state secular. But they realised politics could promote goals such as opposing gay rights and abortion, or remaining tax-exempt. Politics also became a way to deal with religious competition, says Amy Erica Smith, a political scientist at Iowa State University. The evangelical lobby in Congress includes 195 of 513

federal deputies.

Among Brazil's 40-odd denominations, the most partisan is the Universal Church of the Kingdom of God (UCKG), which has 2m members and 8,000 churches. It was founded in 1977 by Edir Macedo, an ex-lottery official who owns a TV network. He once backed the PT but in 2018 declared for Mr Bolsonaro (who is Catholic but was rebaptised in the Jordan river by a Pentecostal pastor). Members were bombarded with anti-PT propaganda. Some wavered, says Jacqueline Teixeira, an anthropologist at the University of São Paulo. But after Mr Haddad called Mr Macedo a "fundamentalist charlatan", they felt that if they did not vote for Mr Bolsonaro, "they'd be denying their religious identity," she says.

Evangelical support for Mr Bolsonaro reflects dissatisfaction with the PT's progressive policies and its role in Lava Jato. "When the church enters politics, it brings

morals," says Antônio Falcão, a Baptist former city councillor from Barra de Pojuca. Mr Bolsonaro has not legalised state religious education or outlawed gay marriage, but he has increased punishment for people convicted of domestic violence and slashed public funding for Brazilian cinema, calling it "pornographic".

In April his nominee to the supreme court decreed that churches could open on Easter Sunday, despite covid-19. Some 500 people crowded into a UCKG temple in Porto Velho. The pastor chided the congregation for skipping services. "You have faith in doctors, you have faith in vaccines but you don't have faith in God?" he cried. Church workers promptly appeared with velvet bags; the UCKG instructs its members to donate 10% of their income to the church. "All that matters is that you are good with God," said the pastor.

Only 35% of evangelicals disapprove of Mr Bolsonaro, against 44% of all Brazilians. Still, some may break with him in 2022. Marina Silva, an evangelical former senator, says that politicians should be judged for their credentials, not their creed. Assemblies of God is less hierarchical than the UCKG. It has megachurches with *bolsonarista* pastors but most of its 12m members belong to hole-in-the-wall congregations like Cremilda's. Pastor Josemar says he is sick of "representatives who don't represent us".

In 2018 evangelicals were "like chicken with our heads cut off", one of Cremilda's friends comments. Now she thinks that the president is "not a man of God". But Cremilda is undecided. She is waiting to see whether other candidates share her Christian values. "Bolsonaro has lost his way," she says, but she believes in the power of redemption.



Praying for good government



The prospects

Time to go

Brazil's future depends on the outcome of the 2022 election

THREE MONTHS after Mr Bolsonaro became president, he ordered the army to mark the 55th anniversary of the coup. His press office distributed a video in which a man explains that the 1960s were a “time of fear”. Communists were “killing their compatriots” in the name of a leftist ideology. The public took to the streets, begging for intervention. Then “Brazil remembered that it had an army.” Black and white shifts to colour as the music picks up and Brazil’s flag appears. “The army saved us,” the man says.

Brazil’s military dictatorship killed 434 people, far fewer than regimes in Argentina and Chile did. That partly explains how, after handing power back to a civilian government in 1985, the army became the institution Brazilians trust most. It is also why Mr Bolsonaro was able to exploit his military past to be elected.

The generals who joined his government hoped to advance the army’s agenda. Instead they hurt its reputation. They were complicit in Mr Bolsonaro’s mishandling of the pandemic, which led to tens of thousands of unnecessary deaths. They failed to get him to sign vaccine contracts or to stop him greeting supporters when he caught covid-19. Under Mr Pazuello, the health ministry resembled a *boca de fumo* (drug den) for hydroxychloroquine. At one point it launched an app for doctors that recommended the drug to nearly everyone, including infants and people with hangovers.

Yet the army has so far held Mr Bolsonaro back from an anti-democratic “adventure”, in the words of Mr Santos Cruz. How long it can do this is less clear. Mr Bolsonaro may try to cling to power if he loses next year by claiming he has won and inciting protests. “Only God will remove me,” he has said. He says electronic voting is subject to fraud and he has eased gun laws to “arm the people”

against “dictators”. His fans include police and thugs. The army may find it has to choose between democracy and Mr Bolsonaro.

Other Brazilian institutions have survived his assaults, though their resistance can resemble a game of whack-a-mole. In May, after police began a defamation investigation into a YouTuber who had called Mr Bolsonaro a “genocidaire,” a judge threw out the case. Another judge quashed a probe into Almir Suruí and other indigenous leaders accused of “lies” about government failings in the pandemic. *Folha de S. Paulo*, a newspaper, denounced censorship by printing an op-ed of 185 insulting names for the president, including “tyrant”, “butcher” and “donkey”.

But while the courts have rebuffed Mr Bolsonaro’s authoritarianism, other institutions have suffered at the hands of his loyalists. After Congress blocked two decrees to give the agriculture ministry control over indigenous land claims, Funai changed its policy to allow farmers to claim ownership of tribal lands not yet officially demarcated. Police and prosecutors are investigating allies and sons of the president, but that has cost some their jobs. Mr Bolsonaro has named one pliant supreme-court justice and will be able to pick another this year.

If he manages to win re-election (by fair means or foul) he could nominate two more. His attacks on democracy would then become more brazen. His more radical fans shun institutions and see him as their saviour. The *bolsonarista* who said she wants civil war once camped outside Mr Moro’s court. When he quit and accused the president of obstructing justice, she replaced her pro-Moro T-shirt with one saying, “I would go to war for Bolsonaro”.

Four more years of him in charge could devastate the Amazon, where much of the rainforest could turn into dry savannah. Mr Bolsonaro prefers losing a trade deal with the EU to changing his environmental policy. That would be bad for the whole country, which has been going in the wrong direction for a decade. Growth is stuck, jobs are scarce, millions of people are hungry and politicians think only of themselves. For a country that likes to party, there is little to celebrate.

In 2018 only 14% of Brazilians said they trusted the supreme court “a lot” and 3% trusted Congress. Mr Bolsonaro exploited such disillusion to win election. His rivals in 2022 must turn it against him. Polls suggest Lula would win a runoff. But as vaccination and the economy pick up, the president may regain ground. Lula must show how his handling of the pandemic has cost lives and livelihoods, and how he has ruled for his family not for Brazil. The ex-president should offer solutions, not *saudades* (nostalgia).

On March 31st, the anniversary of the coup, six potential challengers to Mr Bolsonaro signed a manifesto saying democracy was “under threat.” Saving it will take more than manifestos. Politicians need to tackle overdue economic reforms. Courts must crack down on corruption. And businesses, NGOs and ordinary Brazilians must protest in favour of the Amazon and the constitution. But it will be hard to change Brazil’s course so long as Mr Bolsonaro is president. The most urgent priority is to vote him out. ■

ACKNOWLEDGMENTS A list of acknowledgments and sources is included in the online version of this special report

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South Africa

The stench of corruption

HARRISMITH

What the ordeal of one municipality says about life under the ruling party

AT TIMES IT can be hard to find the right metaphor for the dysfunction of the South African state. But then, on a recent morning, your correspondent found himself in the middle of a broken sewage works, knee-deep in excrement. Like the other six plants in the municipality of Maluti-a-Phofung, the one in the town of Harrismith is knackered. And it is not the only sign of collapse. The 350,000 people in the municipality are regularly without clean tap water. Rubbish is rarely collected. Power is sporadic. “I feel like crying,” says Sam Twala, a local activist. “Is there any legacy we’re leaving for our kids?”

Under Jacob Zuma, South Africa’s former president, state-owned enterprises were looted on a vast scale. An estimated 1trn rand (\$70bn)—equivalent to nearly 20% of GDP—was siphoned out of state coffers. Creaking ports and regular power cuts are thought to lower annual growth in sub-Saharan Africa’s second-largest economy by one percentage point a year.

Since Cyril Ramaphosa took over as president in 2018 he has tried to clamp down on graft. In his latest move, on May 5th, he secured the suspension of his nemesis, Ace Magashule, as secretary-general of the ruling African National Congress (ANC), after his arrest last year on charges of fraud, corruption and money-laundering. On May 26th Mr Zuma pleaded not guilty to charges of fraud, racketeering and money-laundering related to an arms deal struck in the late 1990s. His trial is now under way, after many long delays.

Malfeasance neither started nor ended with the Zuma era. And it goes much deep-

er than national institutions. The starkest effects of corruption and “cadre deployment”, where cronies are given jobs on the basis of loyalty rather than merit, are found in local government—in places like Maluti-a-Phofung.

After apartheid ended in 1994, three areas merged to form Maluti-a-Phofung. The first, Harrismith, was a genteel town visited by Princess (now Queen) Elizabeth in 1947. The second was the farming area around the town of Kestell, named after a man who helped translate the Bible into Afrikaans. The third, and most populous, was the Sotho-speaking area of QwaQwa, one of ten ethnic “homelands” set up to divide and rule the black population.

Running such a diverse area would be a challenge for any party. But the ANC, which has been in charge since the first local election in 2000, has barely tried. In March 2018, shortly after Mr Ramaphosa became president, the municipality was placed under administration, as per an emergency provision in the constitution. Because of fierce opposition led by allies of the then mayor, Vusimusi Tshabalala, who says that the administrators were appointed because of machinations within the ANC, it took another year before the outside team actually got to work.

When it did, it found a catastrophe. The municipality is insolvent. It hardly bothers to collect utility bills; revenues cover just ▶▶

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▶ 30% of expenditure. It keeps itself afloat with central-government grants and by not paying creditors. It owes around 7bn rand, mostly to Eskom, the state-run power utility. In 2018 it granted Eskom the power to take money directly from the council's bank account, but an appeal is dragging on, so the utility cannot implement the order.

Even while they were under supervision, local ANC panjandrum tried to authorise payments to entities without any contracts, according to a report by the administrators. Spending was "unauthorised, irregular, fruitless and wasteful". Bigwigs allegedly complained when they were denied flashy cars more expensive than rules allowed. In August 2020 the Special Investigating Unit, a national anti-corruption body, said it was looking into municipal activities since 2012, the year before Mr Tshabalala became mayor. He argues that the problems in the municipality predated his mayoralty, and have continued since he left. "I am prepared to go to any court of law to prove my innocence," he says. (In 2019 the ANC gave this ally of Mr Magashule a new plum job: chief whip in the provincial parliament.)

As yet no one has been brought to book. In a sign of how the ANC's internal battles at the national level play out as local skirmishes, the government of the Free State (the province of which Maluti-a-Phofung is part and which is influenced by its premier, Mr Magashule) dismissed the administrators in March 2020. It said their job was done. Leona Kleynhans of the opposition Democratic Alliance (DA) predicts a return to "industrial-scale looting".

And so life goes on as normal for locals such as Thabiso Mofokeng. In the former QwaQwa he walks down the hill from his shack, cowbells clanking in the distance. He arrives at a pile of rocks. Mr Mofokeng lifts the stones and points to a dirty trickle from an underground stream. Because pipes are broken, it is his village's only source of water. Residents queue with buckets from 3am. Though there are water-storage tanks, the municipality rarely fills

them. There is supposed to be a call centre he can ring to report water problems, but despite a contractor having been paid, the facility was never built.

Maluti-a-Phofung is far from unique. The Auditor-General, a watchdog, last year gave just 8% of municipalities clean audits, most of them run by the DA. In 67% of cases accounts were "not credible enough" to use. "Irregular" expenditure reached 32bn rand in 2018/19, up from 25bn in the previous financial year.

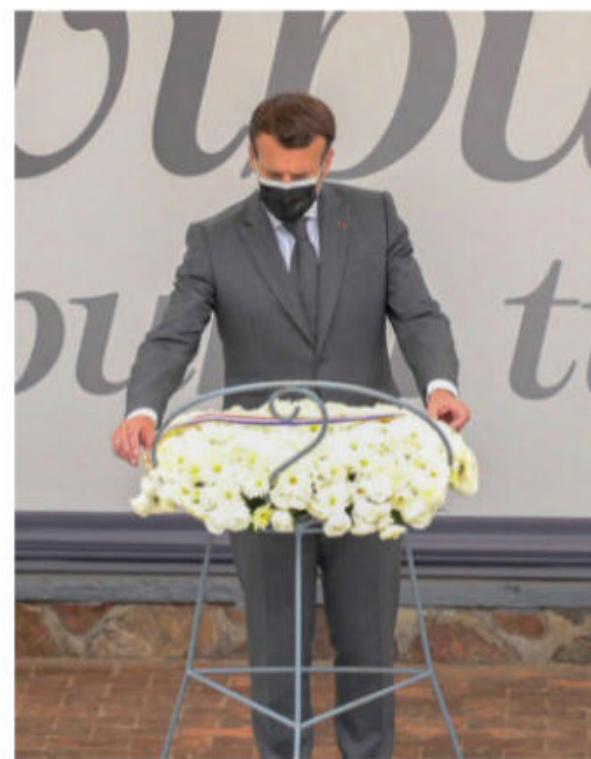
Ahead of local elections in October South Africans are fed up. Public satisfaction with big municipalities is at its lowest level since Consulta, a research firm, began polling in 2014. Though protests over poor services decreased in 2020 because of the pandemic, the numbers in 2018 and 2019 were the highest since 2004, when Municipal IQ, a data provider, started counting.

Some South Africans are taking action. In January 2019 Mr Twala and another township leader, Willy Tshabalala, visited a faulty pump station. There they met Petrus van Eeden, a burly white farmer. The trio decided to fix Harrismith. They set up Water Heroes, a grassroots outfit that repaired hundreds of pipes and collected rubbish. "We ran the town for a year and it was clean," says Mr van Eeden.

Other forms of citizen activism are visible as well. In December a court gave temporary control over sewage works in the Kgetlengrivier municipality to a residents' association—a move that has inspired a similar group in Harrismith to try to take its municipality to court. Many ratepayers' associations are withholding taxes in protest. "A sea change is under way at local government level," argues David Everatt of the University of the Witwatersrand.

Such local groups are often led by whites. Afriforum, a pressure group for Afrikaners (South Africans of mostly Dutch descent), is backing court cases in places like Kgetlengrivier and Harrismith. It also has a spin-off infrastructure firm, known as Pionier, which it puts forward to run services instead of municipalities. Afriforum insists its efforts will help all residents, black and white. Yet it is viewed with mistrust by many black South Africans. In 2018 its CEO said that apartheid was wrong, but not a crime against humanity. Mr van Eeden, himself of Afrikaner stock, is reluctant to join "a group of white people wanting to take 'their' town back".

He prefers a model like Water Heroes, which bridged racial divisions while also fixing pipes. But the organisation was treated with scorn by the municipality, which accused it of vandalising property and forced it to stop. Services soon collapsed. The hope that gushed in 2020 has turned to effluent in 2021. "When I started I was optimistic," reflects Mr van Eeden. "Now I'm demoralised." ■



France and Africa

Atonement

PARIS

France asks forgiveness for its past, and rethinks its future

FRANCE "MUST look history in the face and recognise the share of suffering that it inflicted on the Rwandan people". So declared President Emmanuel Macron at the genocide memorial in Kigali, Rwanda's capital, on May 27th (pictured). "In ignoring the warnings of the most clear-sighted observers," he said, "France bore damning responsibility in a chain of events that led to the worst." He hoped survivors of the genocide might "perhaps forgive" France.

Mr Macron is the first French president to recognise his country's responsibility in the slaughter of hundreds of thousands of Rwandans, mostly Tutsis, in 1994. France backed and armed the Hutu regime that planned and carried out the massacres. French leaders long claimed their country had "misunderstood" what was going on. Rwanda, under Tutsi leadership, cut diplomatic ties with France in 2006. In his speech, Mr Macron disappointed some survivors of the genocide by not explicitly apologising. But Rwanda's president, Paul Kagame, said his words were "more powerful than an apology".

In Paris Mr Macron's acknowledgment is considered part of an effort to reset policy in Africa, using history to reshape current ties. Last year France returned 27 works of art to Benin and Senegal, after Mr Macron promised to start handing back artefacts taken under colonial rule. He also agreed to end the French treasury-backed CFA franc, a west African currency some regard as a colonial relic (and which is still ▶▶



used). This year historians have published two official reports: one, by Benjamin Stora, on France's role in Algeria, the other, by Vincent Duclert, on its actions during the Rwandan genocide. "History weighs heavily on our relationship with Africa," says Hervé Berville, a Rwandan-born deputy from Mr Macron's party: "Treating questions of history and memory is indispensable, especially for younger people, if we want to build healthier ties."

The 992-page Duclert report is damning. It concludes that France bore "overwhelming responsibility" for not doing more to stop the slaughter. Officials, aid workers or reporters who queried French policy at the time "were met with indifference, rejection or bad faith". Decision-making on Rwanda was centralised at the presidency, under François Mitterrand. Officials dismissed the massacres as a merely "tribal" conflict. Behind France's policy was a primordial worry: the "threat of an Anglo-Saxon world", represented by Mr Kagame's English-speaking Rwandan Patriotic Front, which was leading an insurgency against (and ultimately overthrew) the French-speaking Hutu regime.

Mr Macron's Africa reset is based on a fresh geostrategic calculation. France has in the past sought to perpetuate "*Françafrique*", a cosy web of ties with its ex-colonies. Mr Macron, by contrast, declared in 2017 that he was from a "generation that does not come and tell Africa what to do". Keen to promote broader French economic interests, and wary of competition from China and Turkey, he has courted non-French-speaking leaders. After Rwanda, he headed to South Africa to discuss getting covid-19 vaccines to the continent, as well as more French business.

There is a tension in this strategy. Engaging with Mr Kagame's authoritarian regime, increasingly friendless in the English-speaking world, is controversial. History still underpins the old network, if not the new. France keeps 5,100 soldiers in the (heavily French-speaking) Sahel as part of Operation Barkhane, a counter-insurgency operation. In April it looked like business as usual when Mr Macron flew to Chad for the funeral of Idriss Déby, the country's strongman ruler for three decades, calling him a "loyal friend". Chad is France's main military partner in Operation Barkhane.

France's Sahel policy is under particular strain after the recent ousting of Mali's president and prime minister by Assimi Goita, who led a military coup last year as well. On June 2nd the African Union suspended Mali's membership and threatened sanctions if a civilian-led government is not restored. Mr Macron, who is due to review troop levels in the region, has declared, "We can't stay there for ever." But history suggests that such threats are easier to issue than to carry out. ■

Congo

Mount Nyiragongo's fury

SAKE

Hundreds of thousands of people have fled Goma, fearing lava and deadly gas

THEY GRABBED blankets, clothes and mattresses and rushed out of their houses at dawn on May 27th. In their tens of thousands, they streamed out of the city of Goma, in eastern Congo, terrified of what its volcano might do next. Some fled east towards the border with Rwanda (see map). Others hurried west to the Congolese town of Sake, around 20km away, clogging the dirt road from Goma with motorbikes, cars and pedestrians. Hundreds of people rushed down to Goma's port to pile onto boats heading to Bukavu, a city at the southern end of Lake Kivu.

It was the second mass flight since molten lava began spilling out of a fissure in the side of Mount Nyiragongo on May 22nd. Hundreds of thousands of people have fled Goma, where lava flattened districts in the northern outskirts but stopped short of the centre (and just spared the airport). Some 32 people have been killed and around 3,500 houses destroyed. Yet things could get much worse.

On May 27th the acting governor of North Kivu, the province that includes Goma, ordered the immediate evacuation of about 600,000 residents in the centre of the city (perhaps another 1.5m live in other parts of Goma and many of them did not wait to be told to leave). Magma had been detected underneath the city centre and under the vast, deep Lake Kivu. "An eruption on land or under the lake cannot be ruled out, and it could happen very quickly



and without warning," said the governor, Constant Ndima.

Goma has experienced more than 400 earthquakes since the eruption on May 22nd. One was big enough to knock down a two-storey building. A deep crack has opened up in the road next to Goma's main hospital. Residents fear that, if there is another blast, lava could spurt out of this crack, engulfing the city centre. An even deadlier risk is the prospect of a limnic eruption, triggered by earthquakes and volcanic activity. Dissolved carbon dioxide would explode from the lake's deep waters, possibly sending a tsunami-like wave over the city. Worse, it could form a deadly cloud of gas. A vast volume of carbon diox- ➤



Lava and loss

► ide could asphyxiate everyone in Goma and Gisenyi, a lakeside town in Rwanda, just over the border.

Limnic eruptions are rare but tend to be deadly. The last one, in Cameroon in 1986, killed more than 1,700 people, some as far away as 25km from the lake. If the lava believed to be bubbling beneath Lake Kivu raised its temperature by more than one degree Celsius, there could be an “overturn”, or limnic eruption. The number of earthquakes in the area has been decreasing, but large ones still shake the city. “Pressure is still building, there is potential for a magma intrusion into the lake,” says Adalbert Muhindo, a volcanologist. “This could cause a limnic eruption, but it could be on a smaller scale.” Dario Tedesco, a volcanologist monitoring Nyiragongo, has told people in the area to report anything strange, such as “a discolouration of the lake, increasing temperature of the lake or bubbling inside the lake”. These, along with the smell of rotten eggs given off by sulphur dioxide, are warning signs.

The eruption on May 22nd took the residents of Goma by surprise. This might, in part, have had something to do with the fact that the city’s volcano observatory has barely received any money since October 2020, when the World Bank’s funding cycle ended. The bank decided not to cough up again when it emerged that many of the employees on the observatory’s payroll were not actually working there. Since the funding stopped, lots of the staff who really do monitor the volcano have also not been paid; some have stopped turning up.

Magma or militants

For some who have fled Goma, it was not the first time. Clashing rebel groups have terrorised eastern Congo for over 25 years. In total, around 5m Congolese are displaced, mostly because of conflict. Many of Goma’s residents escaped from nearby villages that are preyed on by men with guns. They are used to grabbing a handful of possessions and rushing out into the night.

In Sake food is scarce and life is grim. “Conditions here are terrible but I am frightened to go back,” says Ange Rusangiza, whose house was destroyed. She has been sleeping on the floor of an unfinished building. According to UNICEF, ten suspected cases of cholera have been recorded in Sake, prompting fears of an outbreak.

Many of Goma’s residents have stayed put, hoping for the best. “Yes, if the lake explodes, I will die, but I don’t think it will,” says Eddygar Shombo. He lived through an eruption of Mount Nyiragongo in 2002, when lava engulfed swathes of the city. Scores of people were killed and more than 120,000 were left homeless. But, like many others, Mr Shombo fears that if he flees, his home will be looted. “I have everything here, I cannot leave,” he says. ■



Israel

Almost there

JERUSALEM

Binyamin Netanyahu’s opponents reach a deal to replace him

NAFTALI BENNETT, the tech millionaire turned politician who is poised to become Israel’s next prime minister, began his political career in 2006 as chief of staff to Binyamin Netanyahu, then the leader of the opposition. Mr Bennett (pictured) admired Mr Netanyahu for years and played a key role in his return to power in 2009. Mr Bennett’s memoir begins with a note of gratitude to his former boss, and ends with an adulatory chapter entitled “What I learned from Binyamin Netanyahu”.

How times have changed. Mr Bennett’s Yamina party is now part of a coalition that is on the verge of ending Mr Netanyahu’s 12-year reign as prime minister. The coalition deal, featuring eight parties holding 61 seats (see chart), was finalised just before a midnight deadline on June 2nd. But the potential new government still must win a confidence vote in the 120-seat Knesset (Israel’s parliament) in the coming days. Mr Netanyahu will undoubtedly do everything in his power to prevent that from happening.

It is no wonder that the negotiations

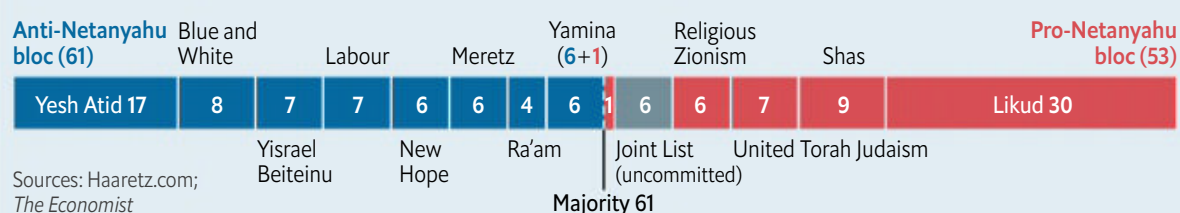
came down to the wire. Israel is used to governments made up of disparate parties, but this one would be the most diverse in history. On the right are Mr Bennett’s Yamina, along with two other nationalist parties (Yisrael Beiteinu and New Hope) which are also led by former aides to Mr Netanyahu (Avigdor Lieberman and Gideon Sa’ar). In the centre is the coalition’s largest party, Yesh Atid, led by Yair Lapid, a secularist. He is the architect of the new government. Under the deal, he would take over from Mr Bennett as prime minister if the government lasts more than two years.

There are other centrist and left-wing parties in the coalition, but what makes it historic is the inclusion of Ra’am, which has four seats. It would become the first truly independent Arab party to join a government since Israel’s founding in 1948. For decades the Arab parties have been shunned and, in turn, have shown little interest in joining a coalition. Ra’am will not hold any cabinet seats. But its leader, Mansour Abbas, used the party’s leverage as a potential kingmaker to obtain greater re-►►

Numbers game

Israel’s Knesset, number of seats by party, March 2021 election result

■ Potential new government



► sources for Israel's Arab minority.

It took the parties opposed to Mr Netanyahu time to get their act together. In three of the four elections since 2019 they won a majority of seats, but they failed to join up before now. Weeks of nerve-racking negotiations over who would get which cabinet posts preceded the current agreement. At one point Mr Bennett abandoned the talks, reportedly citing the conflict in Gaza and Arab-Jewish clashes on the streets of Israeli cities last month. But his negotiations with the prime minister bore no fruit. "The elections have proven there is no right-wing government under Netanyahu," said Mr Bennett on May 30th. "There's unity or fifth elections."

In order to lead the new government effectively Mr Bennett will have to suppress some of his more right-wing views. In the past he has opposed the creation of a Palestinian state and favoured annexing much of the occupied West Bank. He is an ardent supporter of settlers, once leading the council representing them (though he is not a settler himself). Some regard him as more right-wing than Mr Netanyahu, though not nearly as ruthless. He is also an observant Jew: if sworn in, he would be the first prime minister to wear a yarmulke, or Jewish skullcap, for everyday affairs.

But Mr Bennett notes that he is not the only coalition member with what some consider extreme views. "For the new government to succeed, all the partners will need to exercise restraint," he has said. "No one will be asked to give up on their ideology, but everyone will have to postpone the realisation of some of their dreams. We will focus on what can be done, instead of arguing over what is impossible."

Perhaps the coalition can take some inspiration from the Knesset's election of a new president of Israel on June 2nd. Lawmakers voted overwhelmingly for Isaac Herzog, a former leader of the Labour party and government minister. The president's role is mostly symbolic. Still, it was a rare display of consensus for the divided body.

Bibi's last stand

Mustering a majority is a big achievement for the opposition. But it is not over the finish line yet. The parties reportedly discussed a range of issues during their negotiations, from committee posts to legalising cannabis. Some reports suggested that there were still details to be hashed out. Then there is the confidence vote, which could take place as early as June 7th—or the speaker of the Knesset, a Netanyahu loyalist, could try to delay it by an extra week.

In that time Mr Netanyahu will try to pick off wavering members of the coalition in order to deny it a majority. They are already coming under pressure. Members of Mr Bennett's party have been called "traitors" by the prime minister's allies. Prot-

ests have been held outside their homes. Senior rabbis have phoned them to warn of the spiritual dangers that the new government poses to the Jewish people.

Mr Netanyahu is also doing his part. In a televised tantrum on May 30th, he accused Mr Bennett of carrying out "the fraud of the century" and compared the new coalition to Bashar Assad's regime in Syria and to the rulers of Iran. "Don't form a left-wing government—such a government is a danger to Israel's security and future," said Mr Netanyahu.

Such intimidation has worked in the

past, and one member of Mr Bennett's party has already defected to the prime minister's side. But Mr Netanyahu's act is getting old. Mr Bennett has accused him of "trying to take the entire state of Israel with him to his personal Masada"—a reference to the hilltop fortress where Jewish rebels committed mass suicide 1,900 years ago, rather than be captured by Roman soldiers. He and others on the right turned on Mr Netanyahu not because they disagree with his hardline policies, but, as Mr Bennett explained, "because no one believed [his] promises would be kept". ■

Jordan

A jingle makes nerves jangle

AMMAN

Should gas-truck drivers be allowed to play Beethoven at dawn?

EVERY DAY many groggy Jordanians are woken by the sound of Beethoven blasted down the street. Trucks selling gas cylinders drive around playing a tinny electronic version of "Für Elise" in the early hours of the morning, alerting customers in the style of an ice-cream van. Residents in need of gas flag down the van when they hear the sound. Some consider the gas-truck music a part of Jordanian life's rich soundtrack. Others think it is noise pollution.

Until the late 1990s gas-truck drivers alerted their customers by loudly honking or clanging keys against the cylinders. After complaints about the noise, the government and the fuel syndicate agreed to replace the honking with "a relaxing kind of music", says Hussein Allaboun, head of the Energy and Minerals Regulatory Commission.

In April the commission asked Jordanians how they felt about it. Out of some 10,000 respondents, 27% said they would prefer to phone the gas company and arrange a delivery; 53% said they would like to order through a smartphone app (though one doesn't yet exist); only 20% liked the current system.

The gas-truck music is "the second biggest melody after the call to prayer", says Johnny Amore, an artist who got the tune changed temporarily (to something more Jordanian-sounding) in 2009 under an EU-funded project. The sound sometimes irritates Ali Hassan al-Beer, a bookseller. Still, he believes it is a beautiful symbol, now part of tradition. When the music plays, "the kids come out onto the streets and yell 'Gas! Gas!'," he says. "It became part of our daily routine."

Others disagree. "It's not a symbol. It's not a flag," says Muhammad Habib, who sells nuts. "It's just a work mechanism." Waleed Sharqawi, a menswear salesman, thinks it "so annoying". Musical trucks cannot be deemed traditional, he says, since the practice is only a couple of decades old. He knows people who hate it so much they get "tensed up and pretty aggressive" when they hear it. Besides, the trucks are an unwelcome alarm clock for children and the sick, who would rather not be woken at 6am when the trucks start running.

Mr Allaboun says the music is not the only complaint about the current system. Customers have no recourse if given a faulty cylinder because they usually cannot remember who sold it to them. Some people are not fast enough to flag down the trucks before they drive away. "If you're like me, an old man, it will take you a century to get there," says Mr Allaboun. Luckily for him, his trusted doorman takes care of it.



Road to joy



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Covid-19 in Europe

Hot shots

PARIS

Europe's vaccination campaign has gathered pace, though not everywhere

SPRING SHOWERS and outdoor dining are a clammy combination. But busy café terraces in Paris and beyond suggest that, after months of home cooking, many Europeans are ready to put up with a little discomfort to get out of the kitchen. For now only *al fresco* service is allowed across much of the EU, sometimes paired with curfews. The prospect of a return to normality in the months ahead must suffice to warm diners' spirits during cloudbursts.

It may be a mild annoyance to those huddled under improvised awnings to think of Americans and Britons mostly feasting indoors these days. That mainland Europe is several weeks behind in reopening restaurants (and the economy more generally) is largely caused by the botched start of its vaccination drive. Now the jabbing has gained speed. Normality feels within sight. Tourist hotspots think they can avoid a rerun of the difficult summer of 2020; economists are busy upgrading growth forecasts. But not everywhere is feeling the benefits of vaccines yet.

EU citizens are still far less protected than their American and British counterparts. Just 47% of adults have received their first jab, compared with 67% in America and 75% in Britain. (The figures for second jabs are 22%, 54% and 49%.) A lack of doses at the start of the year meant the EU's pace of vaccination was about six weeks behind America's and ten weeks behind Britain's. At last, however, supply bottlenecks in Europe have eased.

The steady ramp-up of vaccinations in the EU, paired with a drop-off in America, means the two will converge soon enough (see chart 1). Europe wants 70% of its adult population fully vaccinated by summer, whereas America has set a target of 64% by July 4th. A few things need to go right for Europe to reach its goal, but the prospect of overtaking America in the second half of the year is not far-fetched.

The ramp-up in vaccinations is good news for diners—and the European Commission. The EU's executive arm in Brussels was hurriedly put in charge of procur-

ing vaccines for the bloc's 445m citizens last year. Its purchases arrived more slowly than those of America and Britain, which had ensured speedy access to jabs by helping to fund the vaccines' development and signing early contracts with drug firms.

In particular, shortfalls in deliveries by AstraZeneca, purveyor of a cheap vaccine, slowed vaccination. Partly as a result, at the height of the crisis Europe brought in export controls to divert supplies to its own citizens. That jarred with its desire to be seen as an open economy helping the world to face the pandemic. But efforts by Eurocrats to get more doses have paid off. Europe is now receiving roughly as much vaccine per inhabitant as America. Thierry Breton, the European commissioner put in charge of turbocharging deliveries, says the EU will be able to make 3bn doses of vaccines a year by the end of 2021.

More jobs, more jobs

The joint procurement plan was meant to ensure that all EU citizens got vaccinated at roughly the same speed. Having each European country go it alone would have resulted in some places with vastly higher vaccination rates than others. This would undermine Europe's unity in the face of a crisis, and make open borders, for everything from goods to tourists, untenable.

Yet months into the vaccination drive the overall EU figure masks a worrying range of outcomes (see chart 2). Malta, the ►►

Catching up fast

Daily covid-19 vaccination doses administered
Per 100,000 adults, seven-day moving average



Source: Our World in Data

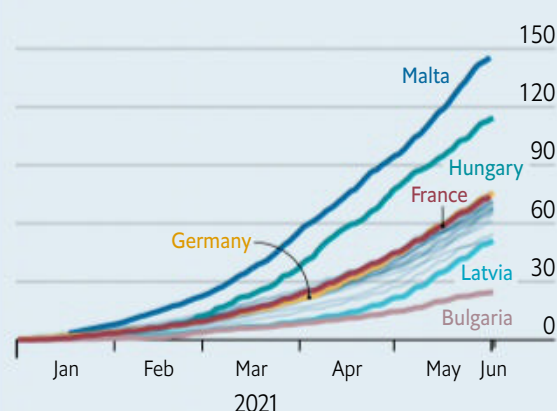
► member state with the smallest population, is near Israeli (ie, world-beating) levels of inoculation. At the other end of the scale, Bulgaria is lagging badly behind. The poorest member state has put 24 needles in arms for every 100 adults, a third of the EU average. Most of the laggards are in the poorer east of the bloc.

That EU citizens would end up vaccinated in lockstep depended on two assumptions. The first was that each country would get the same number of doses relative to population. The second was that national governments would prove roughly as adept at converting doses delivered into arms injected. Neither is true.

On deliveries, some countries have had to make do with less vaccine than their neighbours. The EU scheme works by giving countries an option to buy a set number of doses of various approved vaccines. Many poorer countries last year plumped for relatively more AstraZeneca, which was cheaper and easier to handle. In contrast, the Pfizer-BioNTech and Moderna jabs were often favoured by richer countries. (Hungary, whose prime minister, Viktor Orban, is always keen to needle the EU, took delivery of Chinese and Russian jabs which are not approved at the European level.) So the AstraZeneca shortfall has affected some members, such as Bulgaria,

Mixed bag

EU, covid-19 vaccination doses administered
Per 100 adults, cumulative



Sources: Our World in Data; The Economist

more than others. The EU has tried to rectify this, notably by agreeing to send some of its spare Pfizer doses to the countries that are most deprived.

To make matters worse, not everyone is keen on the AstraZeneca jab. Reports of rare but potentially fatal blood clots have limited its use in some EU countries. Even though Britain has administered it to millions, America has yet to approve it. And Europe has pointedly failed to order any more of it, in part because relations with the company have soured.

As a result there are growing stockpiles of AstraZeneca doses in the EU's fridges. Only three-quarters of the 54m doses delivered have been administered, compared with 95% of Pfizer's serum. Romania has used barely a third of its AstraZeneca stocks; Bulgaria less than half. Part of the reason France has fallen behind Germany in its vaccination rate is because of 3m unused shots of *le AstraZeneca*.

Other factors have held back vaccination, particularly in some eastern European countries. Many of their citizens live in richer parts of the EU and may have been jabbed there, skewing their home countries' national tallies. Minorities, for example the Roma in Romania or Hungary, seem harder to reach. Health systems were often struggling before the pandemic. There has been plenty of disinformation on the safety of inoculations. And good old administrative incompetence has all too often slowed things down.

Fortunately, vaccine scepticism seems to be less common than once feared. Europeans have flocked to be inoculated at higher rates than opinion polls suggested they would. That said, the proportion of Europeans who have been vaccinated is now reaching the level at which the pace of injections began to slow in America.

Europe is trying to paint its slow start as a sign of virtue. By allowing more exports of vaccines, in contrast to America, it looked after some people in poorer countries. But it has faced flak for resisting an American-led campaign to loosen intellectual-property rules around vaccines. A startling order for a further 900m-1.8bn doses of the Pfizer-BioNTech jab signed last month suggests the EU will have plenty to give away in years to come.

Covid-19 cases have fallen across the EU as they did at the same time last year. That is probably thanks to a mix of warmer weather (notwithstanding the odd shower) and vaccines, though the EU is watching the spread across Britain of a new variant, first spotted in India, with concern. A system of "covid passports" allowing people to travel across European borders if they have been tested or jabbed is being set up. After soggy dinners, it may be the prospect of a sunny beach that gets people to the vaccination centre. ■

German politics

Deny the Alternative

MAGDEBURG

The Christian Democrats still struggle against far-right populism in the east

THE SMALL east German state of Saxony-Anhalt is run by a so-called "Kenya" coalition, comprising three parties whose colours match that country's flag: the conservative Christian Democrats (CDU), the Social Democrats and the Greens. But so bad is the infighting it should be named after the similar hues of Afghanistan's flag, chuckles Oliver Kirchner, local head of the hard-right Alternative for Germany (AfD).

He should know. Five years ago the AfD—an extremist outfit shunned by all other parties—won a quarter of the vote, forcing the Kenya trio into their ill-matched arrangement. The AfD's enduring support could oblige them to keep it going after Saxony-Anhalt's election on June 6th.

Parts of this state offer a grimly familiar east German tale of deindustrialisation, depopulation and resentment of know-it-all Wessis (westerners). The AfD's strength in such places gives the CDU, which leads the federal government, a persistent headache. The weird coalitions it dictates are bad enough: Saxony-Anhalt's government has often teetered on the verge of breakdown. In Brandenburg and Saxony the AfD's muscle has forced the CDU into similar awkward contraptions.

But many in the CDU, in Saxony-Anhalt and other eastern states, also bitterly resent the *cordon sanitaire* their leaders have erected around the AfD. Perhaps a third of the CDU's MPs in Saxony-Anhalt would prefer to work with the populists, reckons Wolfgang Renzsch, professor emeritus at the University of Magdeburg. Many regularly flirt with AfD policies, most recently ►►



► in December during a row over TV-licence fees that nearly toppled the government. (That episode, like others before it, was defused by Reiner Haseloff, the wily CDU premier.) Concerned CDU members have circulated a letter to colleagues urging them to hold the line against the AfD.

Eastern states are small, but their dramas still resonate. Last year in Thuringia the local arm of the CDU backed a premier also supported by the AfD. The furore finished off Annegret Kramp-Karrenbauer, at the time the CDU's national leader and Angela Merkel's heir apparent. Her successor, Armin Laschet, takes a robust stance against the AfD. This message is likely to carry Mr Haseloff to a narrow victory over the AfD, giving Mr Laschet a tailwind for September's federal election. Yet he faces a dilemma: the CDU's main rival in the west is the Green party, but in the east it is the AfD. This pair are poles apart. CDU wallahs admit that this makes it hard to find a con-

sistent national message.

One idea is simply to write off a chunk of the eastern vote. Last week Marco Wandewitz, the government's commissioner for eastern Germany, revived an old debate by claiming that some of the electorate there had been "socialised by dictatorship" and did not understand democracy. Other parties, he said, should leave them to the AfD and await a new generation.

Yet 30 years after German reunification, the AfD's strength suggests it cannot just be waited out. In the east it is more popular among younger voters than older ones. And it always manages to find a popular theme, sighs Sven Schulze, the CDU's chair in Saxony-Anhalt: ten years ago it was the euro; five years ago refugees; now covid-19. (Mr Kirchner has vowed to launch investigations into what he argues was an excessive lockdown.) The CDU leadership is determined to lock out the AfD. But it still has no remedy for its eastern headache. ■

Religion in Germany

One roof, three faiths

BERLIN

A new place of worship for Christians, Jews and Muslims

IT IS USUALLY bad news when multiple religions claim the same place of worship. It can lead to conflict, as illustrated by the recent violence at Jerusalem's holiest site. Or it can be a sign that flocks are dwindling, forcing congregations to share space. But Berlin's House of One intentionally puts a church, mosque and synagogue under a single roof.

The cornerstone of the €47m (\$57m) place of worship was laid last week near Alexanderplatz. In four years' time, it will be a structure housing three separate prayer rooms and a 46m-high domed hall for the faiths to mix. "We are building the House to make a statement," says Rabbi Andreas Nachama, one of the project's leaders.

The idea has been in the works for a decade, since local leaders from the three Abrahamic religions came together to think up a plan for a religiously significant spot: the former site of one of Berlin's oldest churches.

An interfaith project made more sense than another church, says Father Gregor Hohberg, a Protestant pastor whose congregation once worshipped at the site. "In Berlin we have a lot of very wonderful churches," he points out. "And all of these churches are not full of people on Sunday mornings." Berlin, after all, is better known for sex clubs and party drugs than piety. Still, another 120 people have already joined Father Hohberg's congregation, years in advance.

Supporters can also sponsor bricks for €10 each.

An ecumenical mega-sanctuary comes with disagreements. In the synagogue, Orthodox Jews insisted on separate seating for men and women. In the church, the big debate was whether the altar should face east or west.

Even before the doors have opened, the House of One is yielding revelations. Archaeologists have discovered around 4,000 skeletons at the site, dating back to the middle of the 12th century, suggesting Berlin is a century older than previously thought.



A ground-breaking moment

Italy and the Mafia

The price of success

ROME

A depraved Mafia enforcer goes free, thanks to a victim's reforms

SHORTLY AFTER nine o'clock on a Monday night, Giovanni Brusca, his brother, their wives and children had abruptly to abandon their roast-chicken dinner. Armed, masked police burst into their rented villa and arrested both men.

That was in 1996. On May 31st Mr Brusca left prison in Rome, a free man after serving 25 years of a 30-year sentence imposed for, among many murders, that in 1992 of Italy's most renowned anti-Mafia prosecutor, Giovanni Falcone. Few recent events have stirred greater revulsion than the release of this former Mafia boss, nicknamed *u Verru*, (the Pig) in Sicilian. "This is not the justice Italy deserves," railed Matteo Salvini, the leader of the populist Northern League.

The emotional reaction was surely understandable. Mr Brusca was a leading associate of the late *capo dei capi*, the boss of bosses—namely the psychopathic Salvatore "Totò" Riina. In the early 1990s Riina launched a terrorist campaign against the Italian state that involved lethal bombings in several mainland cities, the assassination of Falcone and the later killing of Falcone's colleague, Paolo Borsellino. It was Mr Brusca who detonated the bomb that killed Falcone, his wife and bodyguards. And when one of the other members of the hit squad, Santino Di Matteo, was arrested and turned state's evidence, it was Mr Brusca who conspired to silence him by kidnapping his 12-year-old son. After holding him captive for more than two years, he had the boy strangled and his body dissolved in acid.

Ironically, Mr Brusca himself turned state's evidence after his own arrest. After initially misleading interrogators, he began giving them valuable intelligence on the Sicilian Mafia, better known as Cosa Nostra. His co-operation let him escape a life sentence because of a law sponsored, just as ironically, by Falcone. That law has helped police and prosecutors turn several other top Mafiosi and helped steadily to weaken the Mafia over the past 25 years. Cosa Nostra is now less powerful than either the Calabrian 'Ndrangheta or the Neapolitan Camorra.

Falcone's sister, Maria, has said she is saddened by Mr Brusca's release. But, she added, "That is the law—and a law that my brother wanted—so it must be respected." Her brother, one suspects, would have been proud of her. ■



An interview with Ukraine's president

The comedian gets serious

KYIV

Volodymyr Zelensky is clobbering oligarchs but ducking institutional reform

"ISTILL DON'T feel comfortable here," says Volodymyr Zelensky, the president of Ukraine, as he walks briskly into an opulent presidential meeting room. A former comedian in a hit tv series, "Servant of the People", that tells the story of a humble schoolteacher who accidentally becomes president, he is still, it seems, more used to a studio than a palace.

But two years ago his chutzpah, and the failures of his predecessors, won him nearly 75% of the vote in the runoff round of a presidential election. In a country where politics has long been dominated by oligarchs and treated as a means for personal gain, the victory of a man whose only asset was his popularity seemed a miracle. "People saw a Cinderella story and identified themselves with the life behind the screen," Mr Zelensky tells *The Economist*.

He promised to overhaul the political system. "I have been impetuous in my drive for change, but I am not the kind of person who starts off with an exit strategy," he says. For all his good intentions, however, he came into office lacking political experience or even a coherent plan. His presidency has been eventful, but reform has been slow and the results are mixed.

On the positive side, worries that Mr Zelensky would be manipulated by oligarchs such as Ihor Kolomoisky, who financed the tv channel on which Mr Zelensky appeared, and who is under investigation in America, have not been borne out. Neither have the fears that Mr Zelensky would be pushed around by Russia. He has stuck to

his red lines when negotiating over the future of Donbas, the south-eastern region of Ukraine that was plunged into war in 2014 by Russia-backed separatists; and he held his nerve when Moscow massed troops on his border a few weeks ago.

He showed guts when he took on Viktor Medvedchuk, a powerful oligarch and a friend of Mr Putin. Mr Medvedchuk, whose tv channels peddled pro-Kremlin propaganda while the pipeline he controlled pumped Russian diesel into Ukraine, is now under house arrest, charged with treason. His tv channels have been shut down and his assets have been frozen. (Mr Medvedchuk, who also leads the most popular opposition party, denies any wrongdoing.) Vladimir Putin, who is said to be a godfather to Mr Medvedchuk's daughter, has promised to respond "promptly and properly" to the arrest.

On the other hand...

Yet although the worst expectations of Mr Zelensky have not come to pass, nor have the hopes that he would bring in a effective team of reformers. Although Mr Zelensky's government has pushed through a law establishing a market in farmland, the country's justice system remains unreformed and the rule of law is as patchy as ever. Marking the second anniversary of the president's inauguration, *Novoe Vremya*, a weekly, summed up the sentiment in a headline: "Not as bad as we thought...but still quite bad."

Having fired an opening shot against

Mr Medvedchuk, Mr Zelensky has now pitched a new anti-oligarch law. He wants to create a legal definition: that an oligarch is someone who controls a big business, finances a political party and controls significant media channels. He wants to create a register of oligarchs that will, he hopes, make them toxic to investors and drive down the value of their assets if they refuse to change their ways.

Most Ukrainians would agree that their country's oligarchs are too powerful. They have typically used their wealth to capture the state, arranging deals involving the country's resources that benefit them not the taxpayer. However, Mr Zelensky's critics worry that he is simply trying to clobber individual tycoons into submission and grab their media assets, rather than opening up the economy to genuine competition. A leaked draft of the new law suggests it will not grant greater powers to the anti-monopoly body or require oligarchs to reduce their market dominance. Yet it bars anyone worth more than \$80m from owning media assets. Meanwhile, he says, the state needs its own tv channel.

Mr Zelensky has no obvious rivals for now, and seems to like it that way; he is, some say, driven more by vanity than by greed. He is trying to knock out another celebrity-turned-politician: Vitaly Klitschko, a former world heavyweight boxing champion who is now the elected mayor of Kyiv. Mr Zelensky has accused his office of corruption and dispatched law enforcers to conduct dozens of searches. Mr Klitschko says he is still on his feet. "I am an independent political player with a success record. I am building up my party ahead of the next parliamentary elections," he says.

Some of Mr Zelensky's critics detect a whiff of authoritarianism in his actions. Yet Ukraine is not Russia, and attempts to grab too much power there rarely succeed. Faced with a threat, Ukraine's oligarchs may work together to ensure that Mr Zelensky never gets comfortable in the presidential office. But that is not necessarily good news for a country that desperately needs reform.

Mr Zelensky has turned his presidency into a quest: he has broken into a closed political system and stuck up for ordinary people. They have cheered him on. His attack on the oligarchs is popular, as is his defiance of Russia and his government's big investment in new roads. He is still, by far, the most trusted politician in Ukraine: 30% say they would vote for him today, the same number that did in the first round of voting two years ago. With the summer coming, despite covid-19 and the continuing war in the east, there is a feel-good atmosphere in Kyiv. "People are still in love with Zelensky—or rather with his character," says Yulia Mostovaya, the editor of *Zerkalo Nedeli*, an online newspaper. ■

Charlemagne | Tiny but less mighty

The era of small-state privilege is coming to an end



“ONE PERSON, one vote” is a good principle. The ratio in the European Union is a bit more complex: “One Luxembourger, or nine Germans, one vote.” Germany has one MEP for every 860,000 citizens. By contrast Luxembourg—a country roughly the size of Düsseldorf—has one per 100,000.

A disproportionate parliamentary weighting is one of many perks enjoyed by the EU’s gang of small states. Three-quarters of the bloc’s population live in just seven countries; the remainder is spread over the other 20. For them, membership is a sweet deal. Their politicians can wangle top jobs, usually as compromise candidates. A common currency gives smaller European economies a say in monetary matters, rather than being thrown around like a ragdoll by the Bundesbank, as they were before the euro. When it comes to topics such as tax, foreign policy, or changing the EU’s treaties, they wield vetoes. This means Malta (population: 500,000) can have as much say as Italy (population: 60m) when shaping a club of 450m. The EU acts as a geopolitical magnifying glass, making small countries appear much larger.

Within the EU, small states can, for once, shape history rather than be victims of it. In times of crisis, leaders used to running a country with a GDP equivalent to the turnover of a middling S&P 500 company sit round the table with Angela Merkel and Emmanuel Macron, ostensibly as equals. It is little wonder that at their first such meeting, some leaders have the giddy demeanour of a weekend footballer meeting Cristiano Ronaldo. For big countries, the EU is about clinging on to the remains of their former clout; for small ones, the EU has made them more powerful than they could ever have dreamed.

Alas, for the EU’s army of tiddlers, this golden era of tiny but mighty states is drawing to a close. Take tax, an area where small countries have long enjoyed their own exorbitant privilege. In a bloc where capital can flow freely, imposing lighter taxes than a near neighbour is a lucrative trick. Ireland and Luxembourg transformed themselves from nations of farmers and steelmakers respectively into two of the richest countries on the planet by undercutting larger neighbours on tax. Capital flooded in, along with complaints from next door. Since the EU can legislate on tax only by unanimity, there was little the bloc could do. It asked them

nicely to change. They said no.

Times, however, are changing. Joe Biden, America’s president, has launched a crackdown on companies that book improbable shares of their profits in low-tax jurisdictions, promising to whack punitive taxes on them. Ireland, which has a 12.5% corporate-tax rate, is sweating. With America leading the way, other big countries are set to sign up to the scheme. There is not much Ireland and friends can do to stop it. The commission, meanwhile, is still eyeing innovative ways of bypassing a country’s veto when it comes to tax, making ingenious but legally questionable use of provisions in the EU’s treaties. However it is done, the main perk of the small-country club is on the way out.

Citizenship, like tax, is another fundamental right of states. Who but the Maltese government ought to decide who is Maltese? Malta and Cyprus have used this power to make easy money, hawking the right to live and work in the EU to anyone willing to spend a few million euros on government bonds or an expensive flat overlooking the Mediterranean. But when a national passport also confers citizenship of the EU, it becomes every member’s business, some feel. The commission is taking steps to crack down on the practice. Another small-country privilege—to dish out passports however they see fit—is disappearing.

A passport from a small country was once a shortcut to high office in the EU. In European politics, the scale of the job used to be inverse to the size of their home country. People were happier to be bossed around by a Portuguese or a Luxembourger, rather than someone from France or Germany. (Luxembourg has produced as many commission presidents as France and Germany combined.) Things are moving on. Germany, in particular, is now more comfortable laying claim to big jobs. Ursula von der Leyen was the first German to lead the European Commission since the 1960s. The European Central Bank, the institution which has done most to keep the euro together, has been led by bigger countries since its inception. Big countries want their people in senior posts.

If anything symbolises the outsized power of small countries, it is the veto. On certain topics, a solitary “no” can still derail plans. But patience with this arrangement is wearing thin. Hungary, in particular, has adopted an obstructive instead of merely bombastic approach to Brussels. Rather than noisily railing against the EU while quietly going along with it, the country has made a virtue of blocking foreign-policy moves on such things as human rights in China. Yet whenever a sovereigntist like Viktor Orban wields a veto, the EU’s federalists begin to cheer, arguing that he is making their case for them. An EU that relies more on qualified-majority voting is grinding forwards.

The small-country conundrum

One unspoken consequence of the EU becoming more democratic is that its small states must become less powerful. While national governments still hold sway in the EU, they create an imbalance. The EU was founded to rein in the excesses of big European powers, not to replace them with the (admittedly less bloody) excesses of their smaller peers. A bloc where some citizens have more say than others is not a healthy one. True, other continental-sized polities struggle with this question. In America, South Dakota has the same number of senators as California. But that is no excuse to copy their mistakes. Europe’s small countries should not fear losing clout. Until now they maintained their individual power as part of a weaker whole. In the future, they will play a smaller role in a stronger bloc. It is a different deal, but still sweet. ■



Gender wars

Let's talk about sex

WASHINGTON, DC

A backlash against gender ideology is starting in universities

HOURS BEFORE Jo Phoenix, a professor of criminology at the Open University, was due to give a talk at Essex University about placing transgender women in women's prisons, students threatened to barricade the hall. They complained that Ms Phoenix was a "transphobe" likely to engage in "hate speech". A flyer with an image of a gun and text reading "shut the fuck up, TERF" (trans-exclusionary radical feminist, a slur) was circulating. The university told Ms Phoenix it was postponing the event. Then the sociology department asked her for a copy of her talk. Days later it told her it had voted to rescind its invitation, and would issue no more. Ms Phoenix says she was "absolutely furious and deeply upset" about both the damage to her reputation and to academic freedom.

Essex University's vice-chancellor asked Akua Reindorf, a lawyer who specialises in employment and discrimination law, to investigate. Eighteen months later, in mid-May, the university published Ms Reindorf's report on its website. It said Essex had infringed Ms Phoenix's right to freedom of expression and that its deci-

sion to "exclude and blacklist" her was also unlawful. It advised the university to apologise to Ms Phoenix and to Rosa Freedman, a professor of law at Reading University whom it had excluded from an event during Holocaust Memorial Week "because of her views on gender identity". (Essex in the end allowed Ms Freedman to attend.)

Ms Reindorf's report marks a challenge to the transgender dogma that originated on American campuses and has spread to universities around the English-speaking world. Its proponents hold that gender identity—the feeling that one is a man or a woman—is as important as biological sex and that trans people should in all circumstances be regarded as the gender with which they identify. This has increasingly influenced policy-makers: several places allow trans women into spaces that were once reserved for females, from sports teams to prisons and shelters for victims of domestic violence.

The opposing viewpoint, which is often described as "gender-critical", might once have been considered mainstream. It argues that, since biological sex is unchange-

able, even with hormones, surgery or any other form of treatment, the conviction that one has been born in the wrong body should not be dispositive. Gender critics argue that biological differences between the sexes make the continued provision of female-only spaces necessary. Trans activists say that trans women should have access to those places, too. "The emphasis that so-called gender-critical women place on what they describe as threats to women ignores the fact that trans women are overwhelmingly those who are threatened in single-sex spaces," says Lisa Miracchi, an assistant professor at the University of Pennsylvania who has signed open letters disapproving of gender-critical feminists.

The arguments the two sides put forward, in other words, are complex and debatable. But many trans activists think that any disagreement is tantamount to hate speech and try to suppress it. Some universities with policies that reflect the belief that trans women are women have acted on complaints about people who do nothing more than express a contrary view. In May, after students at Abertay University in Dundee reported that a student had said at a seminar that women have vaginas and men are stronger, the university launched an investigation.

In some cases, academics who have objected to "gender ideology"—the view that gender identity should trump biology—have been removed from professional posts. In April Callie Burt, an associate professor at Georgia State University, was fired ►►

from the editorial board of *Feminist Criminology*. She was told her presence might deter others from submitting manuscripts. The problem appears to have been her criticism of the conflation of sex and gender identity in proposed anti-discrimination legislation. Last June Kathleen Lowrey, an associate professor of anthropology at the University of Alberta, was removed as the chair of an undergraduate programme after students complained they felt unsafe. She says she reckons gender-critical posters on her office door were to blame.

Yet the most worrying effect is likely to be invisible. An unknown number of university employees avoid expressing their opinion for fear it will damage their career or turn them into pariahs. The report about Essex says witnesses described a “culture of fear” among those with gender-critical views. This is unlikely to be limited to one university. The report also argues that expressing the view that trans women are not women is not hate speech and is not illegal under British law, whatever university policies might suggest.

The fight back

The report is likely to embolden gender-critical academics in Britain, at least, where they are already more outspoken. There are signs that a backlash to gender ideology is building elsewhere, too. In February, when Donna Hughes, a professor of women’s studies at Rhode Island University, published an article critical of gender ideology, petitions sprouted calling for her to be fired. Her university denounced her and warned that the right to free speech was “not boundless”. Ms Hughes, who is a co-founder of the Academic Freedom Alliance (AFA), which was launched in March, says her university encouraged students to file complaints. She hired an “aggressive” lawyer. In May the AFA announced the university had dropped its investigations into Ms Hughes and affirmed her right to speak.

Ms Hughes’s example is striking because in America, where concerns about free speech in universities tend to focus on racial sensitivities, gender-critical views are rarely expressed publicly. This is partly because there is no federal legislation that specifically protects trans (or gay) people from discrimination, which lends a particular urgency to LGBT activism. Jami Taylor, a professor of political science at the University of Toledo and a trans woman, says she has experienced “transgender-related bias” throughout her career, from being called “it” by students and a colleague to being guided to the men’s bathroom.

America’s political polarisation makes it harder yet to debate such topics. Trans activists often portray gender criticism as a far-right cause. Though it is becoming that, too, it is a topic on which leftist feminists and social conservatives find agree-

ment. In Britain most outspoken gender-critical academics are left-leaning, atheist feminists. Some in America are, too.

Their chief concern is the preservation of female-only spaces. In February Holly Lawford-Smith, a professor of philosophy at the University of Melbourne, launched a website (noconflicttheysaid.org) which invited women to describe their experiences of sharing female-only spaces with trans women. It is not a research project and its reports are unverified. Most describe a feeling of discomfort rather than any form of physical assault. Soon afterwards, around 100 of her colleagues signed an open letter claiming the website promoted “harmful ideology”. It called for “swift and decisive action by the university”. Ms Lawford-Smith kept her job, but there have been at least two marches at the university decrying that. “I think people quite enjoy having a nemesis on campus,” she says.

How did an ideology that brooks no dissent become so entrenched in institutions supposedly dedicated to fostering independent thinking? Pressure groups have played a big part. In Britain most universities and many public-sector bodies have joined the Stonewall Diversity Champions scheme, which means they have drawn up policies that reflect the group’s position on trans identity. The report about Essex said the university’s policy “states the law as Stonewall would prefer it to be, rather than the law as it is”, and could cause the university to break the law by indirectly discriminating against women. It recommended that Essex reconsider its relationship with Stonewall. Several bodies, including the government’s equality watchdog, have since left the Champions scheme.

The influence of pressure groups exemplifies the other big reason trans ideology has gained a foothold in academia: its eli-

sion with the rights of gay people. Many organisations established to defend gay rights have morphed into trans-rights groups. Tamsin Blaxter, a research fellow at Gonville & Caius College, Cambridge and a trans woman, says that academia has become a lot more welcoming to trans people, thanks largely to Stonewall. But some gay people disagree with its new focus. In 2019 some supporters split from the group, in part owing to concerns that its stance encourages gay people to redefine themselves as trans (and straight), to form the LGB Alliance. Similar groups have sprung up around the world.

Students increasingly express gender-critical views. This year a group of feminist students in Cambridge ran a “replatforming” event for gender-critical scholars who had been excluded from academic events (Ms Phoenix was among the speakers). Sophie Watson, one of the organisers, says she has lost friends over the issue. “There’s so much fear over using the wrong language—to disagree with the line that trans women are women is really considered hateful,” she says.

Campus revolt

Gender-critical academics hope that as more of them speak out, others who share their concerns but were afraid to express them will feel emboldened. When Kathleen Stock, a professor of philosophy at Sussex University and one of Britain’s most prominent gender-critical academics, was given a government award for services to education last December, hundreds of academics from around the world signed an open letter denouncing her. More than 400 signed a counter letter in her defence. But many people, she says, prefer to express their support privately.

Universities will no doubt watch how the debate evolves outside academia, especially in the courts. The dangers of eroding free speech are becoming increasingly apparent as judges rule on matters from the medical treatment of trans-identifying children to people who have been sacked after being accused of transphobia. If Maya Forstater, a British researcher who lost her job because of her gender-critical views, wins her appeal against the ruling of an employment tribunal that this was lawful, universities may become quicker to defend their gender-critical employees.

Regulation may also play a part. In February the British government announced proposals to strengthen academic freedom at universities, including the appointment of a free-speech champion. Some (though not all) gender-critical academics welcome the idea. In America lawsuits invoking free speech may make a difference. But it would be better if universities, which owe their success to a tradition of dissent and debate, did in fact defend it. ■





The car industry

Chasing Tesla

A traffic jam of startups is vying to follow in Elon Musk's tyre tracks. Do any stand a chance?

CARMAKING IS LITTERED with defunct marques, from Diatto and Hupmobile to Mercer and Whitlock. America spawned around 250 firms by the 1910s. As the 20th century wound to a close it had three that mattered: Ford, General Motors (GM) and Chrysler. In the past few years an electric version of the early American automobile boom is unfolding on a global scale.

Chinese startups like Aiways, Li Auto, Nio, WM Motor and Xpeng are already making electric vehicles (EVs) in their thousands. In Europe, Croatia's Rimac and Spain's Hispano Suiza are building hypercars, while Britain's Arrival is manufacturing electric vans. American companies such as Canoo, Fisker, Lordstown, Lucid and Rivian hope to start full-scale production soon. Foxconn, a Taiwanese contract manufacturer better known for making Apple's iPhones, may soon also be assembling electric cars for others. As for Apple, its next gadget could be an iCar.

Most of the insurgents are loss-making. Some have yet to earn any revenue. But all see a chance to grab a slice of an industry

that has turned decisively in the direction of battery power (see chart 1 on next page). Everyone wants to be the next Tesla, which has successfully used batteries and clever software to take on the internal combustion engine. In the process Elon Musk's firm has become the world's most valuable car company, worth more than the next three biggest carmakers combined.

Tesla's \$600bn valuation serves as a "torch at the front", says Engelbert Wimmer of e&Co, a consultancy. Now investors are looking for the next beacon. Nio listed in New York in 2018. Xpeng and Li followed suit last year. All are worth as much or

more than many established carmakers. Arrival and several of the American firms have used mergers with special-purpose acquisition companies, or SPACs, as a shortcut to public markets—and to valuations in the billions. Patrick von Herz of Lincoln International, an investment bank, calls it a "global feeding frenzy". He Xiaopeng, Xpeng's boss, has said he expects the market to swell to 300 or so firms before settling at around ten. How do the challengers avoid the fate of the forgotten?

The basic blueprint for survival involves three elements. The upstarts must first find a starting niche from which they can expand. They then need actually to produce cars at scale. Finally, they have to create a sales-and-distribution network. Most will fail at one or more of these steps. Ironically, those with the best odds of emulating Tesla's success may be the ones that look least like it.

Start with picking your battlefield. That could be geographic. Philippe Houchois of Jefferies, another investment bank, reckons that the next Tesla will come from China. Consumers hungry for new tech and a government keen to support electrification have given China's insurgents a head-start. Nio, the largest of the lot, made 44,000 cars in 2020. It is valued at \$69bn. The market capitalisations of Xpeng and Li, respectively \$28bn and \$22bn, are also juicy. Rich access to capital helps fund expansion at home and abroad. Xpeng has already started selling cars in Norway, home ▶▶

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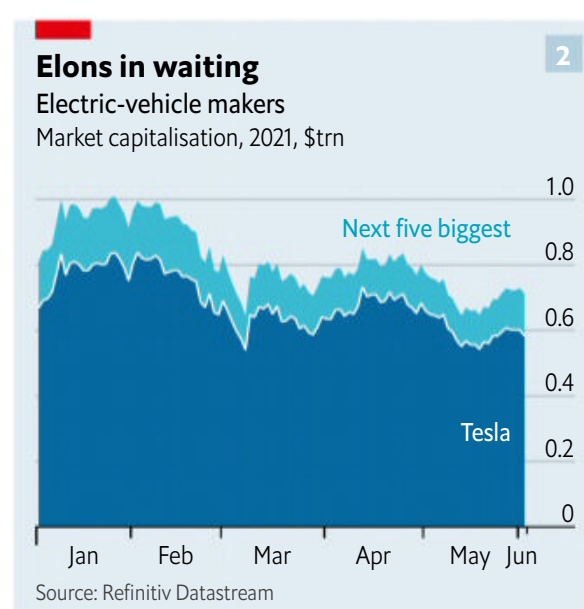
► to Europe's most enthusiastic EV buyers. Nio is about to join it.

Even more important than geography is choosing the right market segment. Tesla was not the first to make EVs but it was the first to make big and pricey premium ones where the high cost of the battery could be absorbed. Many new firms are also aiming at premium SUVs and saloons where profit margins are fattest. But competition is hotting up from established carmakers such as Volkswagen's Audi and Porsche brands, as well as Mercedes. In April Geely, a Chinese firm with global ambitions, launched a premium electric marque called Zeekr. The mass market, meanwhile, is likewise busy, with GM and Ford the latest to announce a big electric push.

Other segments may therefore be a better bet. One is light commercial vehicles, demand for which has been boosted by the pandemic e-commerce boom. Alastair Hayfield of Interact Analysis, a consultancy, sees "no Tesla yet" for delivery vans. Carmakers are merely popping EV power trains into existing products—an unhappy compromise that affects performance. That leaves opportunities for firms like Arrival and Rivian. Another potentially lucrative niche is the hypercar. Wealthy petrol-heads seem willing to fork out \$2m or so to add to their stables. Rimac and Pininfarina of Italy also see these cars as test-beds for EV technology to sell to other car firms. China's Silk EV considers its Hongqi S9 hybrid as a gateway to the mass market.

Identifying the right segment may not be enough, however. Brian Gu, president of Xpeng, admits that the new firms must offer something truly different. For years the industry's technologically stodgier incumbents "didn't realise it was a tech race", says Peter Rawlinson, who runs Lucid. As cars become more like personal electronic devices, being tech firms first and carmakers second may confer an advantage. Foxconn's boss, Young Liu, has argued that the driving experience of the future will be "software-driven and software-defined".

Novel intellectual property is a "good



visiting card" for investors, says Pedro Pacheco of Gartner, a consultancy. But it is not enough to stick big touchscreens onto a standard electric power train, as many of the Chinese Tesla copycats are doing. The over-the-air software updates, proprietary charging networks and online direct sales pioneered by the American firm are now seen as table stakes.

So the newcomers are trying to stamp their own technological mark on the industry. Lucid's techies have extracted range of up to 517 miles (832km) from its batteries. Nio offers a three-minute battery-swap service, to reassure Chinese buyers without access to home charging. Xpeng claims that its voice-activation system is the best in the business. Fisker and Canoo offer subscriptions that give motorists access to car use rather than ownership.

Ultimately, buyers will decide which of these are desirable features and which are gimmicks. But not before the new models are produced and sold. Making a few thousand cars a year is hard enough (though losing money doing so is easy). Actually selling hundreds of thousands at a profit is another matter entirely. "Production hell" nearly sent Tesla under. A lead on flashy software must be backed up with giant presses, paint shops and assembly lines. As such, manufacturing an EV is in many ways not much different to making a petrol car, according to Bernstein, a broker—and no less expensive. A new purpose-built car factory that can churn out 100,000 or so vehicles a year costs at least \$1bn.

To get around this problem some of the challengers are instead repurposing existing factories, as Tesla did by acquiring a disused one in Fremont, California, for a song. Rivian has moved into an old Mitsubishi factory in Illinois. Other newcomers are teaming up with the old guard, with experience of maintaining long and complex supply chains. Baidu has entered into a partnership with Geely and Huawei with its domestic rivals, BAIC, Changan and GAC. Fisker and Nio are taking an asset-light route by using contract manufactur-

ers of the sort used by big carmakers to make small runs of cars or those with finicky features such as folding roofs.

Arrival's approach may be the most innovative. Where Tesla and others are going "giga", the British firm says "micro". Commercial vehicles do not require the styling or customisation of passenger cars, so it is eschewing production lines for "cell" assembly of composite panels. This can be done in small industrial units that cost just \$40m-50m to buy and retool. These can produce 10,000 vehicles a year close to markets, adding scale with less risk.

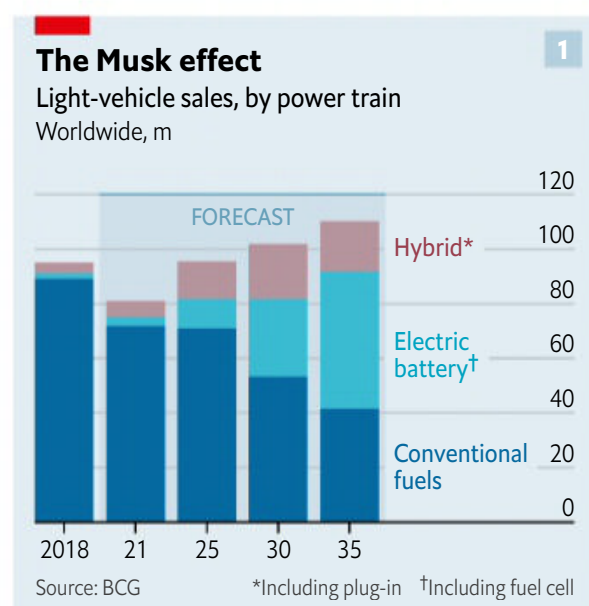
The final hurdle is flogging the vehicles to consumers. The new EV-makers are mostly dispensing with traditional dealer networks in favour of Tesla's model of online sales backed up with shops to show off their wares. That still leaves the challenge of creating a servicing network if anything goes wrong. Such networks, which car buyers have come to expect, can be as expensive and tricky to scale up as manufacturing is. Mr Pacheco of Gartner notes that even Tesla's is still a work in progress. In America the big three Detroit carmakers have nearly 10,000 dealerships that will service cars; Tesla has around 135.

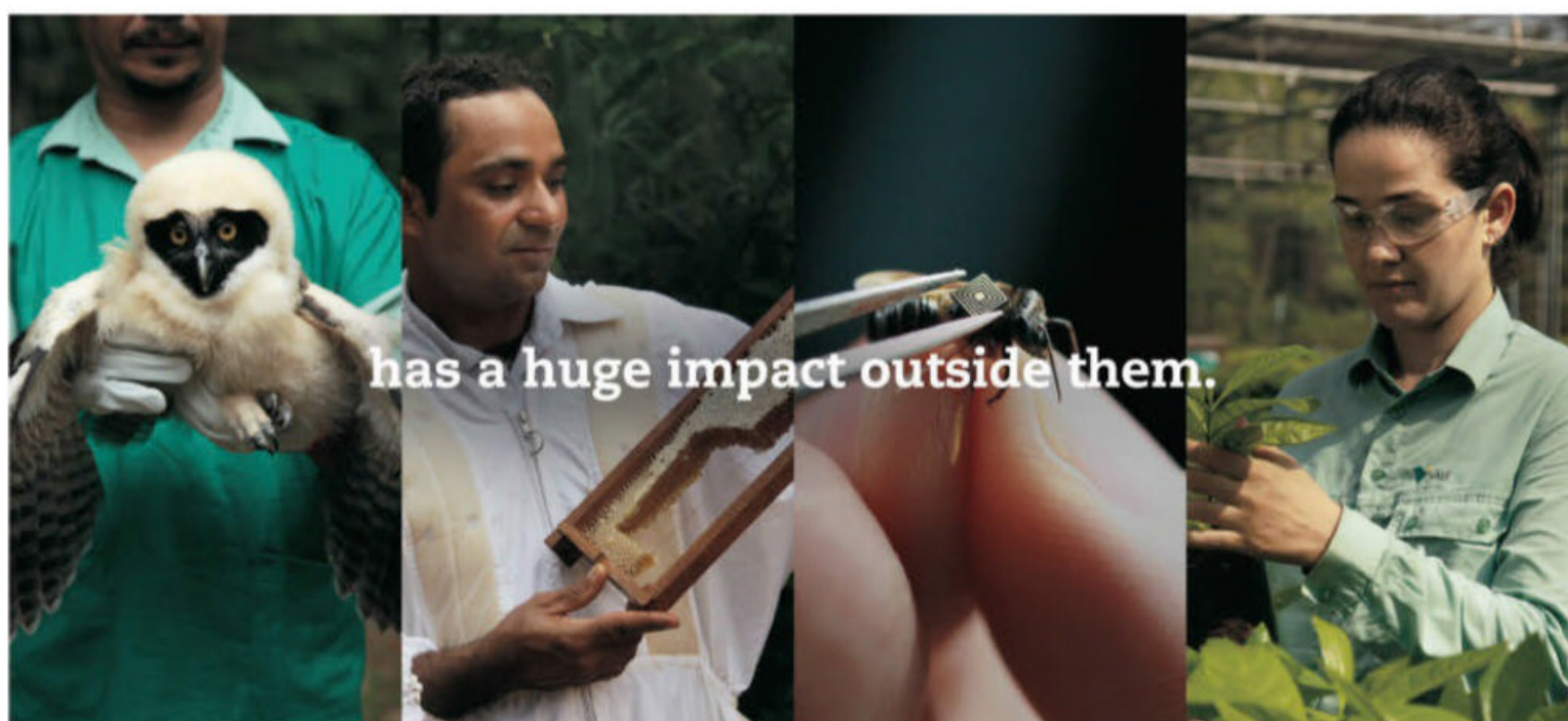
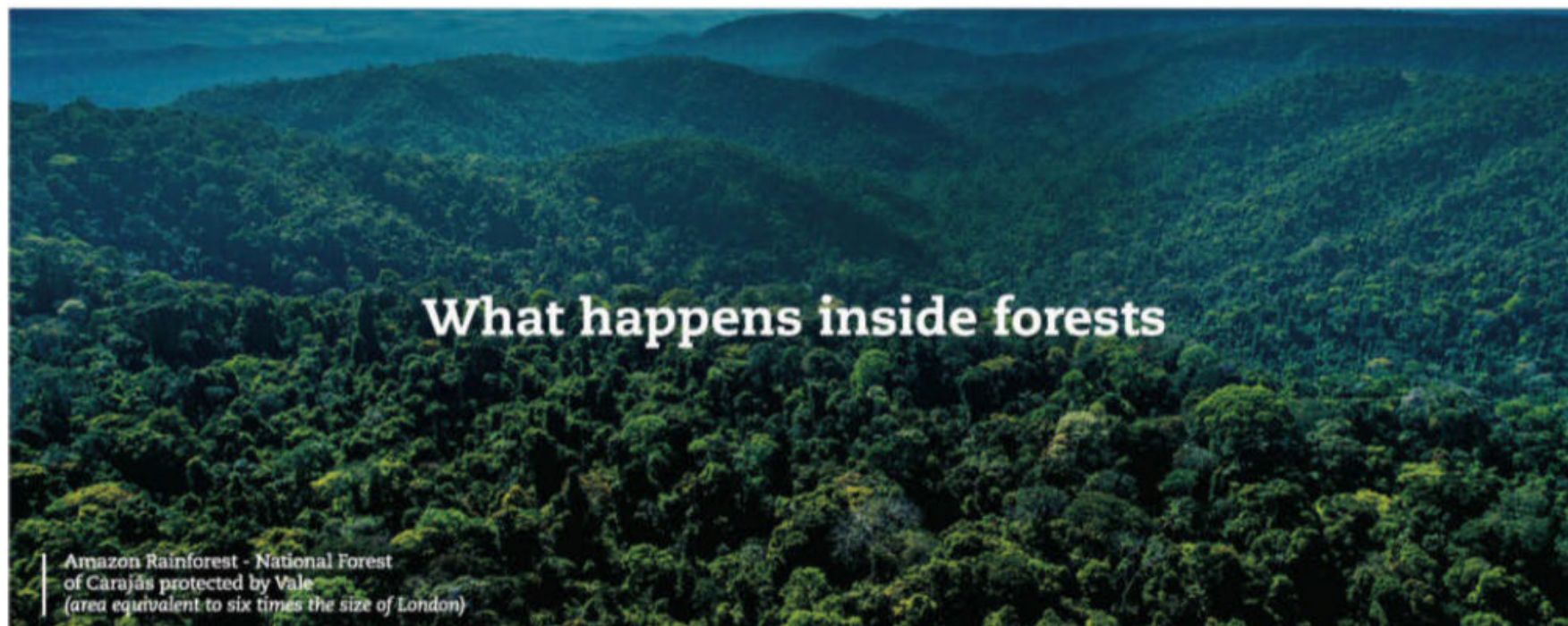
Many new firms won't get that far. Several have already suffered setbacks. Dyson, a British firm better known for vacuum cleaners, sank £500m (\$640m) into an EV effort only to conclude in 2019 that it would never make money. The same year Nio teetered on the brink of bankruptcy until the local government in its home city of Hefei bailed it out. A bloodbath awaits China's myriad smaller EV firms as they run out of ideas and money. Fisker is a reborn version of a firm that went bankrupt in 2013.

Attention, vehicles reversing

As the complicated reality of carmaking sets in, the hype is wearing off among investors (see chart 2). Lordstown's value has fallen by 65% since peaking in February, after it lowered forecast production for its pickup truck and said it needed fresh funds. Canoo's shares are worth less than half what they were when it went public in December, owing to growing doubts about its business plan.

In short, notes Aakash Arora of BCG, a consultancy, the new firms need to establish brands. So far, he says, only Tesla has done so. It can take years to gain a reputation for reliable products, while capital burns like petrol put to a spark. A new entrant needs a trusted name, deep pockets and a proven ability to come up with clever tech. One company that has all those in spades is Apple. The iPhone-maker has been working on an EV for several years. The latest chatter is that it will have one in production by the middle of the decade. Some of its potential competitors will by then be well on the way to oblivion. ■





June 5 World Environment Day

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Consumer goods and sexual identity

When to mind your business

BERLIN

LEGO enters a marketing minefield with its first gay set

"IT IS A branding message that fits into the moral confusion of our time," thundered Albert Mohler, the high-profile president of the Southern Baptist Theological Seminary in Louisville, Kentucky, in one of his daily podcasts at the end of May. Christian evangelical leaders and pundits at Fox News, a conservative cable network, are up in arms about the international launch on June 1st, the first day of Pride month, of LEGO's lesbian, gay, bisexual, transgender, queer, intersex, asexual and anyone who is not included (LGBTQIA+) set. Will Cain, a conservative Fox News host, joked that the colour-coded segregation of the new diversity toy could have been designed by David Duke, a former Grand Wizard of the Ku Klux Klan.

Marketing gay-themed products can be a boon for consumer-goods companies—or a humiliating embarrassment. In the early 1980s Sweden's Absolut vodka was one of the first consumer brands to go after the gay consumer (considered a trendsetter) by advertising in LGBTQ media outlets, sponsoring events such as the Pride parade and donating to charities. LEGO, which is Danish, waited another four decades to launch "Everyone is Awesome", a 346-piece set of 11 monochrome mini-figurines in the colours of the Progress Pride Flag. Brown and black figures represent ethnic diversity; pale blue, white and pink reflect the transgender banner. Each comes with an individual hairstyle but no defined gender

(except for the beehive bewigged purple drag queen).

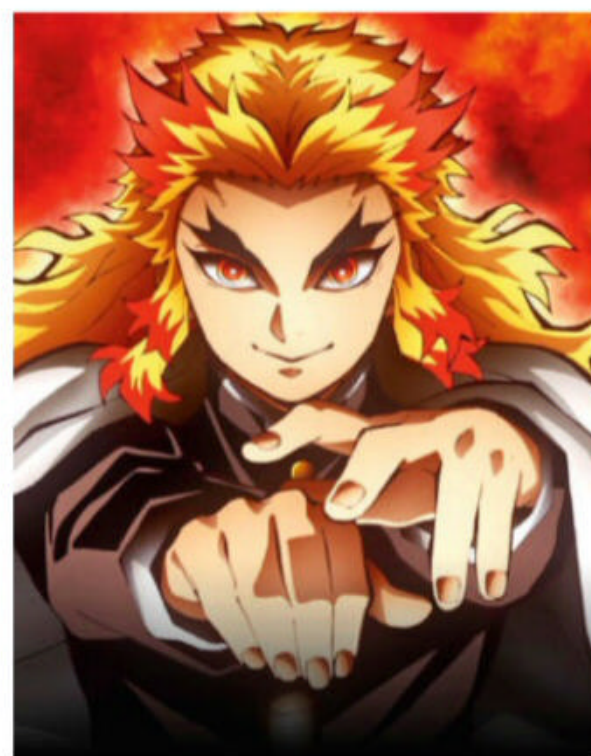
"This is new territory for us," admits Matthew Ashton, who designed the figurines as a "display" or "statement" for those aged 18 or over. (Hundreds of thousands of LEGO customers are adults.) In the past the company made a few subtle nods to gays, such as a little rainbow flag in a model of Trafalgar Square and a bride and groom sold separately. Mr Ashton initially created the set for his personal desk, but it soon attracted the attention of colleagues. He hopes it will start many conversations he wishes he could have had when growing up as a gay man in Britain in the 1980s.

Ian Johnson, chief executive of Out Now, a consultancy advising companies on the development of LGBTQ marketing strategies, says his initial reaction to the toy's launch was dismissive. He thought LEGO was just another firm keen to make a quick buck at the start of Pride Month; the global spending power of gay consumers is around \$3.9trn annually, according to LGBT Capital, a research firm. He changed his mind once he saw how LEGO made its new product very visible by, for instance, publishing a five-minute video on its website of Mr Ashton telling the story of his teenage struggles with his sexuality at the height of the AIDS epidemic.

Corporate rainbow-washing can occasionally backfire. The launch in 2019 of a LGBTQ sandwich (lettuce, guacamole, bacon and tomatoes) by Marks & Spencer, a British retailer, provoked a backlash among gays enraged about being equated with a sarnie. Burger King, an American chain of fast-food restaurants, triggered a similar reaction when it wrapped its whopper in rainbow-coloured foil.

In January last year the chief executive of Hallmark Channel, an American television network specialising in family films, had to resign after pulling ads showing a same-sex couple marrying and kissing—and then reversing the decision following an outcry by consumers. This year Mondelez, a packaged-food behemoth, had to defend a British advertising campaign for its Cadbury Creme Egg in which a male gay couple passes a chocolate egg from mouth to mouth.

LEGO is aware of the need to tread carefully with cultural sensitivities and religious customs. The new set will not be sold in Indonesia, Kuwait, Malaysia, Qatar, Saudi Arabia and the United Arab Emirates, where displaying a sexual identity other than straight can be unsafe (though the firm may launch it in Russia next month, despite widespread homophobia there). Ultimately it is up to local toy shops to decide which LEGO sets they sell. Few are likely to boycott the popular blocks altogether. And the toy shop in Reverend Mohler's parish can just give the new set a pass. ■



Entertainment

Feeling animated

TOKYO

Can anime's blockbuster success outlast the pandemic?

AT FIRST CRITICS doubted that "Demon Slayer: Mugen Train", which hit American cinemas in April, could replicate the success it achieved in its Japanese home market. The animated feature is set in early-20th-century Japan, an unrelatable era for non-Japanese viewers. Defying the odds, the film raked in \$19.5m during its opening weekend, breaking America's box-office record for a foreign-language debut.

For most of its history "anime" was little-known outside Japan. "Astro Boy", a TV series from 1963 that sparked the first anime boom, and subsequent hits like "Doraemon" and "Gundam", were watched mostly by *otaku* (geeks). Nerdy connotations limited their appeal at home. Titles that made it to the West from the 1970s also catered to niche audiences.

Now, gushes Muto Takashi, who runs Dentsu Japanimation Studio, "anime is no longer a subculture; it is a major culture." In 2019 anime-related revenues from TV, streaming and gaming rights, live entertainment, cinema tickets and merchandise sales hit ¥2.5trn (\$24bn). Just under half came from abroad, where the anime market has almost quintupled in size over the past decade. Figures for the pandemic year are scarce but are almost certainly higher. Netflix says that over 100m households around the world streamed at least one of its anime titles in 2020, 50% more than the year before. These featured in the streaming service's daily top-ten list in nearly 100 countries last year. ▶▶



Structural diversity

Netflix and its rivals, such as Hulu and Amazon Prime Video, have exposed the global audience to an extensive library of Japanese anime. The pandemic, which put many live-action shoots on ice, further increased the appeal of anime to streamers. Anime films are also relatively cheap to make. Sudo Tadashi, an anime critic, estimates that an anime show on Netflix costs around ¥30m-50m (\$275,000-459,000) per episode to make—a pittance next to the \$13m reported for “The Crown”.

Netflix has acquired the rights to distribute 21 films produced by the renowned

Studio Ghibli to about 190 countries (excluding America, Canada and, ironically, Japan). It is also creating its own animated content. In March the company said it would launch 40 new anime titles this year, nearly double the number released in 2020. It has also signed production agreements with nine anime studios. Last year Sony, an electronics group with a big entertainment arm, offered to pay \$1.2bn for Crunchyroll, which began life peddling pirated anime content before going legal in 2009 and being bought in 2018 by AT&T, an American telecoms giant. Crunchyroll,

which now boasts 100m registered anime aficionados around the world, is a rare example of a specialised David holding its own in a world dominated by generalist Goliaths like Netflix and Disney.

An obstacle to further growth may be flesh and blood. “The industry has struggled to nurture animators,” says Iwaki Aya-ka of the Tokyo-based WIT Studio. The dwindling domestic talent pool could have trouble meeting rising demand. Good news for the animators, whose historically miserly wages may edge up. For anime fans around the world, not so much. ■

Bartleby Detecting the real bullshit

A popular theory isn't borne out by the evidence

MOST PEOPLE feel, from time to time, that their work is meaningless. David Graeber, the late anthropologist, built an elaborate thesis out of this insight. He argued in a book in 2018 that society has been deliberately creating more and more “bullshit jobs” in professions such as financial services to fill the time of educated workers who need the money to pay off student debts but who suffer from depression because of their work. His thesis has been cited more than 800 times by academics, according to Google Scholar, and often repeated in the media.

When the book came out, this columnist was unimpressed, arguing that the thesis was a partial reworking of the insights of C. Northcote Parkinson, who argued that bureaucracy has an innate tendency to expand and make work for itself. Three academics—Magdalena Soffia, Alex Wood and Brendan Burchell—have undertaken a systematic analysis* of the claims behind Mr Graeber's work and found that the data often show the exact opposite of what he predicted. The bullshit-jobs thesis, in other words, is largely bullshit.

In his book, Mr Graeber relied heavily on surveys of British and Dutch workers that asked participants whether their job made a meaningful contribution to the world. This seems a high bar to clear; it is unsurprising that 37-40% of respondents thought their job didn't qualify. By contrast, the academics used the European Working Conditions Surveys, which by 2015 had talked to 44,000 workers across 35 countries. They focused on those respondents who thought that the statement “I have the feeling of doing useful work” applied to them “rarely” or “never”.

In contrast to the high share of bullshit jobs reported by Mr Graeber, in 2015

only 4.8% of respondents in the EU felt their work was useless. And this proportion had fallen, not risen, in recent years, from 5.5% in 2010 and 7.8% in 2005.

Furthermore, those who work in clerical and administrative jobs are far less likely to view their jobs as useless than those who are employed in roles that Mr Graeber regarded as essential, such as refuse collection and cleaning. Indeed, the researchers found an inverse relationship between education and the feeling of usefulness. Less educated workers were likelier to feel that their jobs were useless. And student debt does not appear to be a factor. In Britain, where its level is the highest in Europe, non-graduates under 29 were twice as likely to feel useless as their indebted graduate peers.

So what is really going on? Part of the problem, surely, is the prejudice felt by academics like Mr Graeber towards those who work in finance or other capitalist occupations, and a resentment that such people earn so much more than those who work in the caring professions or manual labour. To be fair, Bartleby has met many a

financier and businessman who is prejudiced in the other direction—believing that academics and those in other “dilettante” jobs (like journalism) are living off the wealth that capitalists generate.

Another factor is the human tendency to adopt the culture of their profession; those who sell assault rifles or homeopathic medicines eventually come to believe they are doing good work.

But part of Mr Graeber's thesis turns out to be correct. Employees who think their work is useless tend to feel anxious and depressed. The reason, the academics suggest, is linked to the Marxist idea of “alienation”, which described what artisans felt in the 19th century when they stopped working for themselves and were dragooned into factories.

Alienation depends on how the workers are treated by those in charge. “If managers are respectful, supportive and listen to workers, and if workers have the opportunities for participation, to use their own ideas and have time to do a good job, they are less likely to feel that their work is useless,” the researchers write. Workers are likelier to feel useless when they lack the chance to use their skills or display autonomy. This problem more often bedevils those in low-paid work than graduates in the professions.

In essence, this is a restatement of the old adage that “people don't leave bad jobs, they leave bad managers.” It is a backhanded compliment to managers that less than 5% of workers feel their efforts are useless. You need not envision an elaborate conspiracy to explain why people occasionally find their jobs boring or dispiriting. That's life.

* “Alienation is not ‘bullshit’: an empirical critique of Graeber's theory of BS Jobs”, *Work, Employment and Society*, June 2021



Chinese armsmakers

The best-laid battle plans

HONG KONG

The cold war with America both helps and hinders China's military-industrial complex

JIANGHANG AIRCRAFT EQUIPMENT has struggled to tantalise investors with the fuel systems and detachable petrol tanks it builds for Chinese warplanes. The company, controlled by Aviation Industry Corporation of China (AVIC), the country's biggest aerospace-and-defence conglomerate, had witnessed its share price slump by 50% since it went public in Shanghai last year. But in the first three months of the year demand for its wares has soared. On May 28th Jianghang said that net profit for the period nearly doubled, year on year. Trading in its shares subsequently had to be halted after their price rose by 10%, the maximum permitted one-day swing.

Jianghang is just one of dozens of military-linked companies on a high. Most are not publicly traded and disclose little financial information. State-owned builders of navy vessels have flotillas of listed subsidiaries. AVIC, the main group behind China's fighter-jet programme with more than 1trn yuan (\$157bn) in total assets, has 24 publicly traded divisions. To get a sense of the industry analysts track dozens of small military stocks. Citic Securities, an investment bank, covers 58. Everbright, a state-owned broker, follows 115.

The total weapons sales of China's four biggest firms that make them—of which AVIC is the largest—have been flat at just over \$50bn since at least 2015, according to the Stockholm International Peace Research Institute (SIPRI), a think-tank, even as those of foreign rivals have grown. But if the listed divisions are a guide, things may be looking up for the sector.

The combined operating income of firms followed by Everbright rose by 11% last year, to 475bn yuan. Citic reckons that net profits for the industry's listed contingent grew by about 50% in 2020. As China's economy boomed in the first quarter, especially compared with last year's harsh covid-19 lockdowns, only agribusiness and miners of non-ferrous metals notched up faster year-on-year revenue growth than China's military-industrial complex.

The main reason for this armsmaking bonanza is China's increasingly chilly relationship with America. One note to investors from Huaxi Securities, a broker, was embellished with an image of two fists, draped in opposing American and Chinese flags, flying towards each other. America's attempts to "lock China out of technological advancement", Huaxi analysts say, is

spurring new growth. Citic talks of "a period of volatility not experienced in 100 years" and predicts "a rare period of rapid development" in China's military-industrial enterprise as a result. SIPRI noted in December that Chinese arms groups were benefiting from a programme aimed at modernising its armed forces.

The domestic market is becoming increasingly important for Chinese weapons companies. According to SIPRI, China's arms exports declined by 8% between 2016 and 2020. At the same time, those of America, France and Germany grew. Chinese drones may be cheaper than Western ones but they are also seen as less capable.

Fusion firepower

In an effort to change that state of affairs, and bolster domestic armsmakers in the process, Chinese officials talk up "military-civilian fusion". This long-standing project aims to bring cutting-edge civilian technologies such as artificial intelligence and semiconductors into military supply chains, in keeping with the Communist Party slogan that "civilians and troops are members of the same household." The idea's manifestations include Hikvision, a state-owned maker of surveillance kit, which made 2.2bn yuan in net profit in the first quarter, up by 45% from a year earlier.

Ironically, then, that the same Sino-American tensions that are boosting Chinese armsmakers may end up undermining this strategy. The idea of civilian-military fusion spooked Donald Trump's administration and prompted it to bar American firms from supplying companies like Huawei, a giant maker of telecoms gear that is perceived as being close to the People's Liberation Army (PLA). The result has been disastrous for Huawei. Its revenues fell for the second consecutive quarter earlier this year. It is struggling to procure chips and more Western countries are shunning its 5G mobile networks.

Blacklisting by America may also deprive some defence-adjacent Chinese firms of a source of capital. Foreign ownership of military-linked stocks was thought to be low. It may soon be non-existent. Since January American investors have been barred from owning shares in China Spacesat, a state-owned *Fortune* 500 firm that helps run the country's space programme. The same month Fidelity Investments, an American asset manager, confirmed to its clients that it would sell some securities as a result of sanctions.

Mr Trump's successor, Joe Biden, shows little intention of easing the restrictions. On June 2nd Bloomberg reported that he plans to tighten some of them once again on firms with ties to surveillance and defence groups. A recent paper from the Centre for a New American Security, a think-tank, noted that the Chinese leadership's continued obsession with military-civil fusion reflects concerns that reforms to bring it about "have not progressed rapidly enough". American military strategists would love it if China's efforts to speed things along had the opposite effect. ■



Strategic order book

Schumpeter | The firm that saw the future

Long ago Roche bet on personalised health care. Now its time has come



ROCHE IS A strange entity. The Swiss giant is the world's second-biggest drugmaker and one of big pharma's most profitable firms. But its largest shareholding group, mostly descended from Fritz Hoffmann-La Roche, who founded the company in 1896, is led by André Hoffmann, a nature lover and sustainability advocate who believes that the purpose of business is not mainly to make money. Even its bosses are discouraged from making a quick franc. Severin Schwan, an Austrian who has led the company since 2008, is only Roche's seventh CEO in 125 years. Much of his pay is tied up in company stock for ten years, giving him, as he puts it, "literally a vested interest" in its long-term future.

Another thing sets Roche apart from the crowd. For two decades it has nurtured an unflashy diagnostics division alongside its mainstay of drug production, in an effort to create more personalised health care. This unit, which accounts for almost a quarter of sales, has generated lower margins than pharmaceuticals, and puts off the sort of investors who yearn only for blockbuster medicines. Had it not been for the Hoffmanns' patience, some suspect, activists would have forced Roche to sell it or spin it off long ago.

And yet in the past year or so the ability to diagnose a disease in its early stages has fully come into its own. The division has helped the company through the covid-19 pandemic. Roche was not one of the star vaccine producers, but its workaday PCR and antigen tests bolstered profits despite a slowdown in cancer treatments, its biggest business. Moreover, advances in gene sequencing and other techniques from molecular biology helped identify SARS-COV-2, the covid-19 virus, as well as ways to fight it. That has highlighted the value of combining biotechnology and diagnostics. These are both fields in which Roche excels.

Far from shedding diagnostics, Roche is now doubling down on it, expanding into digitisation and advanced data analytics to create individually tailored cancer treatments. This is, says Tim Haines, boss of Abingworth, a biotech venture-capital firm, "the golden age of diagnostics". Bets placed years ago are making the stodgy-sounding, Basel-based company look prescient.

Mr Schwan, whose background is in diagnostics, can barely contain his excitement. After a long conversation with *The Economist*, he came back for more a day later. As he explains, cancer is a

panoply of diseases based on individual mutations. Diagnostics identifies genetic and other differences between patients, leading to the creation of more personalised treatments. The tailor-made market, by definition, is smaller than the one for blockbuster drugs, but if patients respond better to treatment, the value of drugs can be proportionally higher. Sifting through oceans of genomic data can produce yet more precision.

Accumulating reams of information on patients has long sat awkwardly with concerns about medical privacy. Less so now, Mr Schwan believes. He says the pandemic has helped change the mood in two ways. First, the use of data-crunching to speed up the fight against covid-19 has made health authorities, hospitals and doctors more amenable to the idea of sharing medical records—provided the information is anonymised. This is, after all, biotech, not big tech. "We are not in the advertising business," he says. Second, regulators have shown what he describes as an "incredible" willingness to speed up drug approval by gaining access to clinical-trial data in real time. "Why should we not do the same for life-saving cancer medicines?"

Roche, which has recently fallen behind Merck, an oncology rival, in immunotherapy treatments, has been eagerly waiting for this digital tide to turn. Two American acquisitions in 2018 could prove particularly fruitful. One is Foundation Medicine, a gene-sequencing company that can identify cancers from DNA in blood samples, instead of from tumour biopsies. The other is Flatiron Health, a specialist in cancer-related health records that generates data on patients from the real world, supplementing clinical trials. Both produce what Roche calls insights on cancer. Like its diagnostics business, not only do they help it further its own drug development; they also sell services to rivals, making them businesses in their own right. They are not yet profitable, but one day, Mr Schwan says, the "insights" business could be a third pillar for Roche—as big, if not bigger, than diagnostics and pharma.

There are potential pitfalls. Biology is as messy and unpredictable as nature itself. Data analytics may not be as useful in biotech as in other industries. Roche will not have the field to itself. Silicon Valley tech giants are already muscling in. And Europe, where Roche is based, has long been squeamish about data-gathering and privacy. If that continues to apply to medicine, it will hobble the region's health-care industry.

That said, Roche has a record of pulling off the unexpected. Stefan Schneider of Vontobel, a Swiss investment firm, notes that it has accomplished the rare feat of keeping profits ticking over even as patents on its three biggest cancer drugs, which had peak annual revenues of \$21bn, have expired. Its immunotherapy drug, Tecentriq, has recently shown promising results in early-stage lung-cancer care, which may be a big breakthrough. And it has mastered the art of buying trendy biotech firms without spoiling their innovative fizz.

Black Schwan

Indeed, its success vindicates long-term thinking and shows that shareholders' focus on notions like sustainability can co-exist with commercial success. For all the Hoffmann family's influence, Mr Schwan is no softy. He defends high drug prices in America. He believes in strong intellectual-property protection. When America's government this year threw its support behind patent waivers for covid-19 vaccines, he compared it to communist East Germany's nationalisation of drugmakers. Roche may be unusual. As one of Europe's few world-class megafirms, it is ballsy, too. ■



Commercial property

Shaky foundations

As office buildings remain empty, does a financial reckoning loom?

OFFICES THESE days are temples of indulgence as much as places of work. One Vanderbilt, a new skyscraper in Manhattan, has unveiled a restaurant run by Daniel Boulud, a Michelin-starred chef. Amazon's second headquarters in Arlington, Virginia, will include an amphitheatre for outdoor concerts. In London, 22 Bishopsgate is so dog-friendly that its receptionists issue passes to pets. The recently opened glass tower, which dominates the City of London's skyline, also houses a climbing wall and a spa.

As companies try to tempt workers back to the office, developers and investors are betting on new buildings with alluring amenities. But a huge uncertainty hangs over them: will enough people come? Even as vaccinations progress, workers have been slow to return. In early May only one in 20 buildings in America had occupancy levels above 10%, compared with a third in Europe and Africa, and roughly half of buildings in Asia, according to Freespace, a property-tech firm. With the return to work only just beginning, stimulus still in place and long leases yet to expire, the ex-

tent of any losses is worryingly hazy.

Covid-19 has sharpened the demand for newer buildings with better facilities. JPMorgan Chase, a bank, will reduce its overall office space even as it builds the second-tallest skyscraper in Manhattan for its new headquarters. More than half of tours across New York City by prospective tenants are of high-quality "Grade A" offic-

Pretty vacant

Office vacancy rates, %



Source: JLL

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es, compared with 38% before covid-19. This shift is happening alongside another disruption: a tilt towards greener workspaces. Energy efficiency and air-filtration systems are now seen as essential. Asset managers including BlackRock and Brookfield have pledged to get their assets to net-zero emissions by 2050 or sooner. Many property firms are pledging that all new buildings will be net-zero carbon. The shift towards wellness and sustainability is no fad, insists James Goldsmith of AXA Investment Managers. "This isn't a social experiment. We're asset managers—pension money is at stake."

Few in the industry, however, will be drawn on the reckoning they may face. The flight to quality is leaving older buildings looking undesirable just as remote working reduces the total demand for office space. Start with the risk that older buildings become stranded assets. Around half of Hong Kong's premium stock and nearly two-thirds of commercial property in London were built more than 20 years ago. SL Green, Manhattan's largest office landlord, says rents at its older properties are down by as much as 10%. Without substantially lower rents or improved ventilation, access to outdoor space or natural light, many will struggle to sell or attract tenants.

Some dated offices are getting facelifts. Fabrix, a developer, is upgrading a 1960s building in London to include a rooftop forest and a glass-floored infinity pool. Others will be converted into lab and research space, or houses. When AIG, an in-

► surer, moves to a recently renovated skyscraper in midtown Manhattan, part of its old headquarters, a tower block built in the 1980s, will be converted into flats. The City of London Corporation, which oversees the Square Mile, plans to turn vacant space into at least 1,500 new homes by 2030.

Yet none of this can mask the fact that as remote working sticks, demand for office space should fall. Companies are beginning to rethink their property needs, with many downsizing or delaying new leases. Globally, more than 103m square feet of office space has already been vacated since the pandemic began, according to Cushman and Wakefield, a broker. That is 18% more lost floor space than during the financial crisis of 2007-09. Vacancy rates rose steeply over the past year, reaching 18% in the spring in America (see chart 1 on previous page). The forecasts are gloomy. Roughly one in five offices in America will be empty in 2022, according to Moody's Analytics, a consultancy. Rents across the country are projected to fall by 7.5% this year; those in San Francisco, by 15%.

Puzzlingly, the gloom has not yet made its way into conventional measures of prices and credit. Rent-collection rates for properties run by real-estate investment trusts (REITs) in North America remained above 90% for most of last year, according to S&P, a rating agency. They may have risen since then. *The Economist* has examined collection rates for half a dozen of the world's big listed office landlords: the average stands at 98% for the most recent quarter. Delinquency rates on commercial-mortgage-backed securities linked to shops spiked last summer, and are still high, according to Trepp, a data provider. But those for offices have been unperturbed by the pandemic, at around 2%. The price paid for office space in several big cities has also held up so far (see chart 2).

A number of obfuscating factors cloud the picture, however. Generous stimulus might have postponed increases in delinquencies and distressed sales. And many firms have not made up their minds yet. No

Knocked down

MSCI World REITs* index
January 1st 2007=100



one knows how many workers will stay home, and for how many days of the week. For the most part, investors are avoiding rash transactions: buyers are wary of overpaying, while sellers are unwilling to take a loss in case the crisis turns out to be a blip. The volume of sales has shrunk, making prices a less reliable gauge of health.

One way to penetrate the uncertainty is to look at more forward-looking measures of valuations. These suggest that office property has been dealt a blow by covid-19. A price index based on appraisals, calculated by Green Street, a research firm, is 9% below its pre-pandemic peak in America. The share prices of REITs that invest in offices remain 13% below their level in early 2020 (see chart 3).

Central banks are on the alert. The reliance of commercial property on debt financing means a downturn could have nasty reverberations across the financial system. Banks' exposures are sizeable: the stock of loans made to the sector by American banks exceeds \$2trn, or about a fifth of their total lending. In its latest *Financial Stability Review* the European Central Bank warned that subdued activity could be masking deeper trouble, and deemed risks from property to be "elevated". Many pension funds around the world have loaded up on commercial property in recent years as lower interest rates have forced them to seek returns from less liquid assets.

The fate of office property could well rest on vacancy rates. If they stay high, then things could start to get hairy. In April the IMF reckoned that a lasting increase in the vacancy rate of five percentage points would dent commercial-property valuations by 15% over five years. Fitch, another rating agency, estimates that the value of offices in America could fall by more than half if workers continue to work from home for three days a week. The long-term nature of property leases and the continued availability of debt mean that losses from the pandemic may not materialise for several years. But if the reckoning comes, it will be painful. ■

Oil prices

The clumsy cartel

NEW YORK

OPEC's discipline will be tested as oil demand picks up

“THE DEMAND picture has shown clear signs of improvement.” So declared Abdulaziz bin Salman, the energy minister of Saudi Arabia, at a virtual gathering of the Organisation of the Petroleum Exporting Countries (OPEC) on June 1st. The cartel and its allies, chief among them Russia, have been squeezed badly by the covid-induced recession, which cut global demand for oil from nearly 100m barrels a day (bpd) in 2019 to 91m last year. In a frantic effort to prevent a price collapse, OPEC+, as the group calls itself, agreed to cut output in early 2020. Yet it failed to stop the price dipping below \$20 a barrel (see chart).

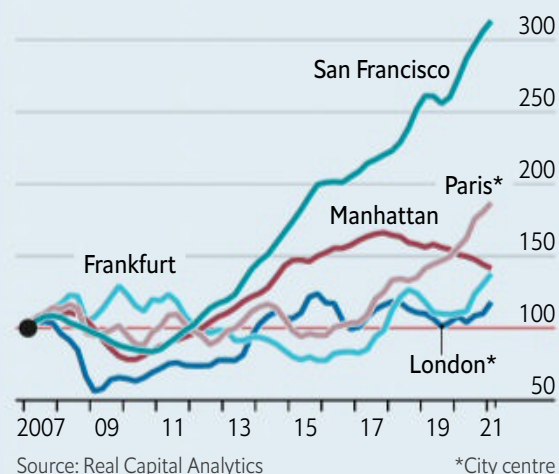
Now the cartel believes that oil demand is at last on a firm path to recovery. Ministers agreed to boost supply by roughly 450,000 bpd in July, part of their plan to restore nearly half of the output cuts made last year. Saudi Arabia, which boasts the lowest production costs and the most spare capacity in the cartel, and often acts as a swing producer, indicated it would also soon reverse a unilateral output cut of 1m bpd made earlier this year.

In response, the price of the benchmark Brent crude shot above \$70 a barrel on June 1st for the first time in two years. Several indicators confirm the view that oil demand, a proxy for economic growth, is taking off. Oil inventories, which shot up last year, are falling sharply. The International Energy Agency, an official body, estimates that global oil demand may recover to pre-pandemic levels within a year. In America, demand for petrol surged during the Memorial Day weekend at the end of May, a robust start to its summer “driving season”.

OPEC's celebrations may yet prove pre-►

Unfazed?

Office sale prices, Q1 2007=100



In recovery

Brent crude oil price, \$ per barrel



► mature. One drag on prices could be Iran, where output has been curbed by American sanctions. Speculation that negotiations to revive a deal on Iran's controversial nuclear programme might soon make progress proved unfounded. The delay means extra Iranian oil is not about to suddenly flood the market. But if a deal is somehow struck this summer, analysts reckon that Iranian exports could rise by 1m bpd or more by the end of the year.

Furthermore, though tight inventories and high demand push up prices in the near term, those very same prices will tempt America's shale-oil producers, currently restraining investment, to splash out. Saudi Arabia might also find it harder to keep OPEC disciplined, observes David Fyfe of *Petroleum Argus*, an industry journal. Members tend to adhere to agreed cuts when demand is collapsing, but rising prices encourage cheating.

A bigger worry, says Paul Sheldon of S&P Global Platts, an analytics firm, is "an unexpected demand setback" in 2022.

America and China are back to their gas-guzzling ways thanks to the spread of vaccines; Europe is not far behind. But energy demand in India and Latin America, where the pandemic still rages, remains fragile. Mr Fyfe points out that long-haul transportation is another source of weakness.

The gravest threat to the cartel comes from technological change. There are widely divergent views on how quickly demand for the black stuff will give way to greener fuels, even among oil majors. But purveyors of petroleum will almost certainly find a carbon-constrained world tough going. Edward Morse of Citigroup, a bank, makes a subtler point about innovation. Oil may surge to \$80 a barrel in the short term, but that is hardly the start of a "new secular bull run": as the global cost of finding and developing oil has fallen by over half in the past five years to \$10-15 per barrel, he reckons fair value for crude is \$40-55. The "clumsy cartel", as Morris Adelman, an energy economist, once dubbed OPEC, is in for a rocky ride. ■

Hong Kong

Failure to land

HONG KONG

Protests and a pandemic have not broken the property market. What could?

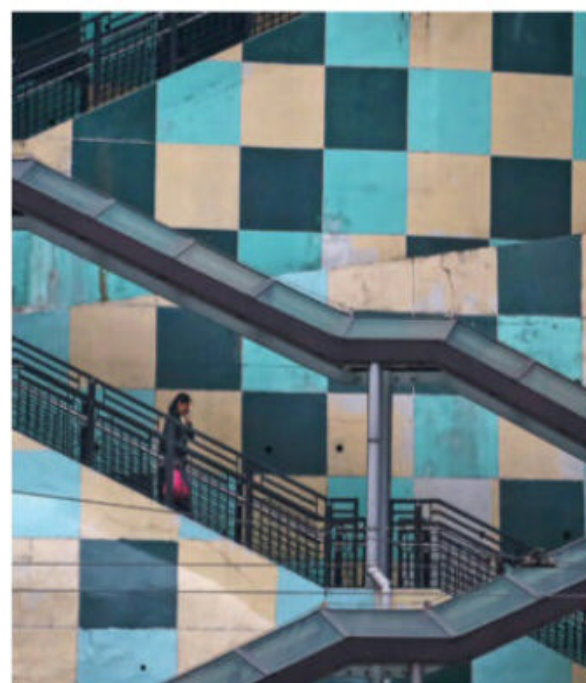
PLANES NO LONGER land in Kai Tak, Hong Kong's old airport. But nostalgists can stroll along the new "sky garden", an elevated walkway lined with frangipani, myrtle and acacia, that passes above the old runway. By scanning a QR code along the route, visitors can "augment reality" by superimposing an image of a landing plane on their selfies. The park is part of a redevelopment plan that will eventually yield a hospital, tax office and new homes for tens of thousands of people. On either side of the walkway, cranes, diggers and welders labour busily to augment the reality of Hong Kong's cramped and pricey housing.

They have their work cut out for them. Property in Hong Kong remains horribly expensive, despite two years of protests and pandemic. House prices in April were only 1.5% below their peak in 2019. In one tower block being built in Kai Tak, a flat of 889 square feet sold last month for over HK\$30m (\$3.9m).

The property market has resisted the pandemic better than it did the SARS outbreak of 2003, when prices fell by almost 8%. Indeed, the market has remained tight this time partly because of decisions made back then. When SARS struck, house prices had already fallen by more than 60% since 1997. To curtail supply the government re-

solved to "withdraw from its role of property developer", vowed not to "sell land at a pathetic price", and reported with satisfaction that the supply of new flats was dwindling. Hong Kong built nine new towns (now home to almost half of its population of 7.5m) between the 1970s and the early 2000s. It has not finished any since.

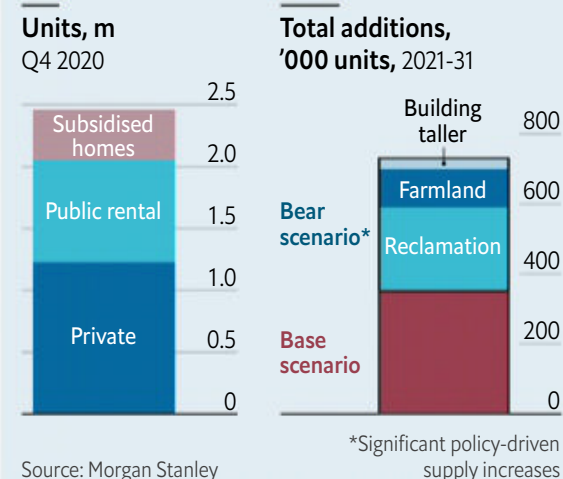
Instead the government has corralled housebuilding into smaller, piecemeal



Returning to earth

Confidence and supply

Hong Kong, homes



sites, often located in and around existing developments. It is too embarrassed to call them "new towns", said one speaker at a recent conference hosted by Hong Kong University Business School. It calls them "new development areas" instead.

With the help of such sites, the government hopes Hong Kong will add 430,000 flats over the next ten years. That, it reckons, would satisfy rising demand. But these targets tend to be over-optimistic: since 2007, housebuilding has undershot them by about 18% in an average year. If the pattern persists, Hong Kong will add only about 350,000 homes in the next decade.

In this "baseline" scenario, housing is likely to grow dearer still, according to Morgan Stanley. So what would it take to curb property prices? The bank has also put together what it calls a "bear" scenario where prices fall by a fifth or more. For that to happen, Hong Kong would have to add about 730,000 homes over the next ten years, the bank calculates, increasing the existing stock by almost 30% (see chart).

That would require encroaching on fields, sea and sky. Hong Kong would have to build taller, packing more floor space into each site. It would have to speed up the conversion of farmland, which can take 15 or more years. And it would have to add 235,000 homes on land reclaimed from the sea. This would include the government's controversial plan to add land to eastern Lantau, Hong Kong's biggest island, home to 172,000 people as well as white-bellied eagles, Bogadek's burrowing lizards and finless porpoises, which conservationists argue could be threatened by the initiative.

Although it would take years for these efforts to reach fruition, a credible plan could change sentiment—and prices—immediately, points out Praveen Choudhary of Morgan Stanley. In the bear scenario house prices fall by 20% by the end of 2022. The downward turn would, in other words, resemble one of the abrupt landings in Kai Tak that used to make arriving in Hong Kong so thrilling. ■

Private equity in China

Serving a higher purpose

HONG KONG

The Chinese state is pumping public funds into private equity

STATE CASH is burning a hole in the pocket of Shenzhen's Communist Party secretary. Wang Weizhong told angel investors late last year that if they set up a fund in the south China tech hub, the government would bear 40% of their losses. For the monstrous 400bn-yuan (\$62bn) state fund backing such activity, an investment of 3m yuan—the size of a typical angel investment—is a rounding error. For private investors the invitation sounds too good to be true. It might be.

After several years of loose monetary conditions and bumper dealmaking, liquidity in private equity (PE) in China began to dry up in 2018. New regulations made it harder for banks and insurers to invest. So-called “government-guided” funds set up by local governments or national ministries, by contrast, thrived. Local authorities were encouraged to launch such investment vehicles to lure startups to their cities, along with talent, technology and, eventually, tax revenues. Owing to a lack of in-house investment talent, most of them have acted as limited partners (LPs) in private-sector funds.

More than 1,000 government-guided funds have cropped up across China since 2015. By late 2020 they managed some 9.4trn yuan, according to China Venture, a research firm. A national fund focused on upgrading manufacturing technology held 147bn yuan at the last count. One specialising in microchips exceeded 200bn yuan in 2019. Almost every city of note across China operates its own fund. A municipal fund in Shenzhen says it has more than 400bn yuan in assets under management, making it the largest city-level manager of its kind. In the northern city of Tianjin, the Haihe River Industry Fund is putting to work 100bn yuan along with another 400bn yuan from other investors.

As a result, PE in China is now flush with state financing. In 2015 private-sector money made up at least 70% of limited-partner funds pouring into the industry. By the end of 2019, state-backed funds accounted for at least that much. Their dominance has only increased since then; by some counts they hold more than 90% of the money in Chinese funds of funds (ie, those that invest in other funds). According to Chinese media, learning to deal with government funds is now a “required course” for PE managers.

A degree of state influence is now un-



avoidable. But whether that is beneficial or not is hotly contested. Some investors and advisers say taking government cash can help align private and public interests. “Government LPs can open doors for you,” says Kiki Yang of Bain, a consulting firm. State fund managers often understand local policy objectives and can steer investors in the right direction, says a venture-capital investor. The influence can go too far, however: Shenzhen Capital, a huge state fund, posted pictures on its website of a meeting it held in December where it helped each of the 42 companies it had invested in to launch a Communist Party committee. These are seen as a way to imbue private companies with party ideology.

There are other drawbacks, too. Government funds are “squeezing out other LPs”, says one of China’s top venture-capital in-

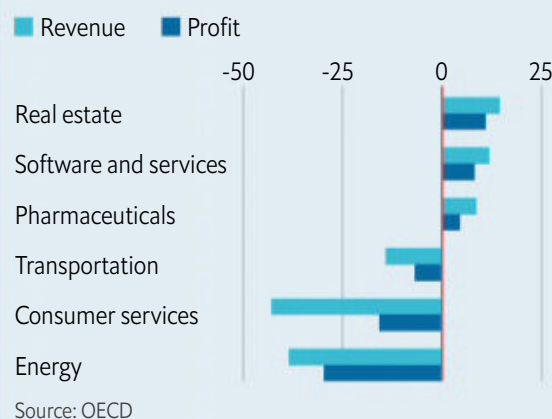
vestors. Clear mismatches in interests have also surfaced. Members of China’s PE elite cut their teeth at global investment groups such as KKR and TPG, two American firms. Their main aim is to produce hefty returns for LPs. Not so for government-guided funds. “Rarely do you have a guided fund that is chasing returns,” says an adviser to several of them. Instead, state investors are mainly trying to engineer a windfall in local tax revenues by attracting new companies, especially tech groups. Balancing these interests can lead to tensions, says one China-based investor, and often results in investments that hinge on whether or not a company is willing to move to a specific city. Some even fear such problems could gradually lower overall returns for private-sector investors.

So far, though, the arrangement has worked well for many private funds. With smaller funds dying off over the past few years—either owing to lack of capital or huge losses—competition for target assets has eased a little. The market is healthier, investors say, as private and state capital is channelled to better fund managers.

But will it last? One lingering concern for some PE investors is that government funds might dispense with the middlemen, and do more of their own direct investing. Several large government funds have been recruiting from private-sector banks and law firms, bolstering their ability to cut deals, notes a lawyer who works with them. “They are starting to compete with us directly,” says the venture-capital investor. Private investors will appreciate state cash much less when they are vying to outbid it. ■

Mixed blessings

Change in revenue and profit, 2019-20*, %
OECD countries, best- and worst-performing sectors

**Corporate bankruptcies**

% change during crisis

**Divergence, big time**

In its latest *Economic Outlook*, the OECD argues that economies are likely to diverge, as some (America and China) recover from the pandemic faster than others (many poor countries). Covid-19 has also struck different sectors differently: tech and pharmaceutical firms prospered; transport and energy firms suffered. Despite such disparities governments’ policies successfully put the economy into “hibernation”: in many places there were fewer bankruptcies in the final quarter of 2020 than in 2019. The trickiness now is in judging when activity is strong enough for support to be withdrawn.



Overhauling corporate tax (1)

The twilight of the tax haven

The global tax pact under discussion would ruin a lucrative business model

AS IS OFTEN the case in multilateral matters, America held the key. When Janet Yellen, its treasury secretary, announced earlier this year that it was time to end the “race to the bottom” on corporate tax, her remarks supercharged sputtering talks over a global deal to overhaul how much tax multinational companies pay, and where.

Talks are focused on two main changes: reallocating taxing rights towards countries where economic activity takes place, rather than where firms choose to book profits; and setting a minimum global tax rate, likely to be in the region of 15%. Finance ministers from the G7 group of rich countries are set to signal their approval at a meeting on June 4th-5th. The broader G20 could agree terms as soon as July, spurring the other 120 or so countries and territories involved in the talks to fall into line. On May 26th Germany’s finance minister predicted a “revolution” in global tax rules “in just a few weeks”.

All revolutions have winners and losers. In this case the clearest victors would be large economies where multinationals make lots of sales but book relatively little taxable profit, thanks to tax-planning that siphons income to low-tax jurisdictions. This mismatch has grown along with the rise of digital giants like Apple and Google, the assets of which are largely intangible. Poor countries where global companies have factories and other operations stand to benefit, too, though not by as much as they think they should (see next story). The most obvious losers will be the havens that, starting more than half a century ago,

took increasing advantage as globalisation made capital more footloose—offering what they saw as much-needed tax competition, and what many others saw as beggar-thy-neighbour economics.

A study in 2018 concluded that around 40% of multinationals’ overseas profits are artificially shifted to low-tax countries. One official closely involved in the current talks thinks the deal taking shape could “all but kill the havens”. However, havens come in various shapes and sizes, from taxless Caribbean paradises to merely tax-light hubs in Europe and Asia. Some have more to fear than others.

Paradise lost

Things look bleak for the palm-fringed, zero-tax territories, such as Bermuda, the British Virgin Islands (BVI) and the Cayman Islands. Though they make nothing in corporate-tax revenue, they have, to differing degrees, come to rely on fees from subsidiaries of large companies and a cottage industry of accountants, lawyers and other corporate-service providers that sprouted up locally to serve them. Their revenue is mere crumbs compared to the taxes saved by those firms, but a lot for such small economies. Corporate and financial services accounted for over 60% of the BVI’s government revenue in 2018.

The type of deal that the Biden administration is pushing—which would apply the global minimum rate on a country-by-country basis, rather than in aggregate—would blow up these havens’ business model. They are livid, but there is nothing

they can do. A diplomat says they are in the process of being “neutralised”, and are “irrelevant” to the talks. “No one wants to hear from them.” Some at least have other revenue streams: Cayman is a big domicile for hedge funds, Bermuda for insurers.

Better-connected economies that have traditionally been friendly to corporate-tax-planners are less easy to dismiss. Several European Union countries, such as Ireland and Cyprus, have lured investment with a low corporate-income-tax rate (both levy 12.5%), or, as Luxembourg and the Netherlands have done, with rules that make them attractive conduits in tax structures, helping companies avoid tax in other countries. An IMF study in 2019 found that such “phantom” investment had pushed Luxembourg’s stock of foreign-direct investment to \$4trn, an improbable one-tenth of the global total. Hong Kong and Singapore have also benefited as corporate-tax entrepreneurs.

Some of the more egregious loopholes fuelling these flows have been closed in recent years, following an OECD-brokered deal in 2015. Among them is the Double Irish, which funnels profits to subsidiaries registered in Ireland but tax-domiciled in Bermuda or the Cayman Islands, and which may have saved Google alone tens of billions of dollars over a decade.

There is still plenty to lose, though. Ireland is particularly nervous, having come to rely on its 12.5% rate to attract foreign investment, much of it involving real people, offices and factories. Corporate tax now accounts for a record 20% of the country’s total tax take. The Irish have been lobbying America, the source of much of their investment, against a radical reallocation of taxing rights and a minimum tax above 12.5%. Ireland’s finance minister, Paschal Donohoe, has argued that smaller countries should be allowed to use tax policy to make up for the advantages of scale, location and resources that big ones enjoy.

Even a minimum rate of 12.5%, or only just above it, could cost Ireland, though, when you factor in tax breaks. Many big companies using it pay an effective rate in the single digits. The country’s “patent box”, a scheme for profits from innovation, charges just 6.25%. A firm paying that might quickly tire of Irish charms if faced with a six-percentage-point top-up. The government has pencilled in an annual tax-revenue loss from the putative global deal of €2bn (\$2.5bn)—around 2.4% of public revenue, and the equivalent on a GDP basis to America losing nearly \$140bn.

Ireland has some friends in the EU. Hungary, with a rate of 9%, is a noisy champion of tax competition. Cyprus and Malta are sympathetic, too, though “happy to sit in Ireland’s shadow”, says another official. Outside the EU, Singapore and Switzerland have signalled that they consider

► 15% too high. The Asian hub would be happier with 10%.

Luxembourg and the Netherlands, however, have undergone Damascene conversions. The Grand Duchy, lambasted after a leak in 2014 exposed sweetheart tax deals with dozens of multinationals, has passed reforms that narrow tax-arbitrage opportunities and increase tax-ruling transparency. It says it could live with any deal that levels the playing field. The Dutch government, stung by public criticism of its tolerance of tax tricks, has also been trying to close loopholes. “We won’t be the ones who obstruct the deal,” says Hans Vijlbrief, the Dutch state secretary for finance. “My goal is to not be mentioned any more in the list of tax paradises.”

That leaves Ireland and other EU malcontents in a bind. They could in theory wield vetoes, since the bloc’s tax decisions require unanimity. But that looks highly unlikely given the support for change from the union’s big members and America—not to mention the awful politics of blocking a deal seen by the public as necessary to force big business to pay its fair share.

Moreover, America and others could impose minimum taxes on their own companies even without a global deal; indeed, America already has a version for intangible income, albeit set at just 10.5%. The revolution is coming, barring an unexpected breakdown in talks. And with it, a golden era for the world’s tax havens may be drawing to a close. ■

Overhauling corporate tax (2)

Fighting for the scraps

Will poor countries benefit from international tax reforms?

INTERNATIONAL TAX reform pits tax-hungry governments against giant multinational companies and their armies of tax advisers. It sets high-tax jurisdictions against low-tax havens (see previous story). And it requires rich- and poor-country governments to somehow reach agreement. The 139 countries haggling at a forum run by the OECD, a club of mostly rich countries, have yet to reach a consensus. Poorer countries worry that the proposals on the table discussed are too complicated, inflexible and unfair.

Developing countries are thirsty for revenue in general, and reliant on corporate tax in particular. In 2017 African countries raised 19% of their overall revenue from corporation tax, compared with an average of just 9% for OECD members. That is partly because large informal sectors mean that they raise less in, say, personal-income tax.

The current system for global tax dings poor countries in two ways. For a start, multinational companies shift their reported profits to low-tax havens, depriving them of revenue. Then the rules allocate taxing rights to countries that are home to company headquarters, which tend to be rich. Poor countries’ tax revenues are depressed by as much as 5% relative to an alternative system in which profits are taxed based on the current location of companies’ revenues, their employees and their wage bills, according to an estimate by Petr Jansky of Charles University and Javier Garcia-Bernardo of the Tax Justice Network, an advocacy group. By contrast,

those in rich countries are only 1% lower.

The reforms being discussed, and supported by America’s Biden administration, would reallocate the right to tax a slice of some companies’ profits, and agree on a global minimum corporate-tax rate, perhaps of 15%. Poor countries want to crack down on tax avoidance as much as rich ones. But a lack of cash and personnel makes it harder for them to engage in negotiations. Though low-income countries represent 22% of negotiating members, they make up only 5% of those attending important working-party meetings. Those constraints apply to the ability to administer tax and police evasion, too. On May 12th the African Tax Administration Forum

(ATAF), a group of national agencies, criticised the idea of reallocating the right to tax the portion of multinationals’ profits above some “routine” level, as “far too complex”, suggesting that a share of total profits be reallocated instead.

Another worry is that the new deal will become a straitjacket. The Biden administration has proposed a “binding, non-optional” dispute-resolution process as a way of reassuring anxious companies that they will not be taxed several times over. But some poor countries fear being on the wrong end of rulings too often, and see broadly applied binding arbitration as a “red line”. (A process applying to a narrower set of disputes could fly, however.) Another concern is that a minimum tax could threaten poorer countries’ use of tax incentives to reel in investment. But a minimum rate of 15% is still well below most poor countries’ statutory tax rate, leaving room for enticement. A global floor might encourage some countries to go the other way, by emboldening them to raise taxes on profits that are reported at home.

Perhaps the biggest complaint is that rich countries may get the bulk of taxable profits being grabbed back from havens, while poor ones are left with the scraps. In October the OECD estimated that a reallocation of taxing rights on some companies might help raise corporate-tax revenues in poor countries by around 1% (a newer proposal from the Biden administration should yield a similar sum). One negotiator for an African country called that a “disaster for developing countries”. ATAF suggested that more companies be included, by drastically lowering the revenue threshold from €20bn (\$24bn) to €250m. It is hard to imagine rich countries agreeing to that. The complex knock-on effects of a proposed minimum tax of 15% could raise poor countries’ corporate-tax take by another 2-4%. Even so, rich countries will probably make bigger gains still. ■



Working out the tax bill

Free exchange | Pace your debts

New research explores the limits to government borrowing



THE SCALE of Joe Biden's plans is hard to exaggerate. Where the American president's former boss, Barack Obama, pivoted quickly to deficit-cutting after the trials of the global financial crisis, Mr Biden's first budget, which he unveiled on May 28th, will borrow unapologetically. The plans assume that annual fiscal deficits will exceed 4% of GDP through to the end of the decade; net public debt will rise to 117% of GDP in 2030 from 110% today. The largesse raises two big questions. One is whether, coming on top of past stimulus packages, it will contribute to an overheating of America's economy in the short term. The other important question is whether in the longer term America can prudently afford to loosen the purse-strings for a sustained period. As crisis has hit and interest rates have fallen, politicians have felt more able to run up debts than in the past. But the issue of whether and when limits to borrowing might apply still remains. Recent research casts light on these constraints.

In a new working paper, Atif Mian of Princeton University, Ludwig Straub of Harvard University and Amir Sufi of the University of Chicago attempt to gauge governments' room to run. Their analysis (which does not incorporate the effects of the pandemic) builds on recent work that estimates how the "convenience yield" on government bonds—or the amount by which a bond's yield is reduced because of the safety and liquidity benefits it offers investors—varies with the size of the debt burden. Other things equal, the greater the volume of outstanding bonds, the higher the return investors demand. Work by Arvind Krishnamurthy of Stanford and Annette Vissing-Jorgensen of the University of California, Berkeley, suggests, for example, that a 10% increase in the ratio of debt to GDP pushes government-bond yields up by 0.13–0.17 percentage points. (In practice, of course, other things are not always equal: the long-run effect of increased bond supply on safety and liquidity premia may be offset by other factors, such as a short-run surge in demand for safe assets prompted by financial instability, leading to falling bond yields amid rising debt loads.)

Because the supply of bonds matters, Mr Mian and co-authors write, a level of government debt that is too low can result in an interest rate that slinks towards zero. But rates cannot fall much further below zero; the result is narrower scope for central banks to

stimulate activity, and therefore lower economic growth and higher unemployment. The problems of debt sustainability are often associated with high debt levels, which push the interest rate above the economic-growth rate. When that condition is met, the debt burden grows steadily even in the absence of new borrowing. But the authors raise the theoretical possibility of another source of fiscal-sustainability problems: when too low a level of debt leads to serious deflation, dragging the growth rate into negative territory and below the interest rate.

In between those two extremes, the researchers argue, lies a "Goldilocks zone" in which a fiscal free lunch is possible. They flesh out a point highlighted in 2019 by Olivier Blanchard of the Peterson Institute for International Economics: that when the interest rate on public debt is below the economy's growth rate, existing debt burdens have essentially no fiscal cost. In such cases, existing debt will decline as a share of output even if no new taxes are levied—though a government that continues to run deficits may nonetheless add to its debt pile. Assuming a balanced budget and based on estimates of the convenience yield on Treasuries, the authors reckon that America's Goldilocks zone—the maximum level of debt you could reach and then stabilise without raising taxes—could extend up to about 260% of GDP. (The uncertainty around their estimates means the limit could lie between 230% and 300% of GDP.)

There is also a range of indebtedness across which governments may run deficits in perpetuity without increasing the debt burden. America, they estimate, could run a deficit of 2.1% of GDP for ever so long as its debt is below 130% of GDP (after which threshold the largest deficit that could be run in sustained fashion without raising the debt burden drops steadily towards zero).

This logic suggests that though supersized deficits may be appropriate now, America cannot run them for ever. Doing so would cause debt to rise, potentially out of the Goldilocks zone and into riskier territory. And the longer America waits to shrink its deficit to the maximum sustainable level, the closer to surplus (or the further into surplus) that level will be. Mr Biden may take some comfort from the fact that his borrowing is manageable for now. Even so, it could eventually limit America's fiscal freedom.

Bonds away

Importantly, a Goldilocks window is not fixed. Slower economic growth could shrink the safe zone by narrowing the gap between growth and interest rates—unless, that is, an economic slowdown also causes a sharp drop in interest rates, pushing them closer to zero and necessitating fiscal stimulus. Rising inequality may lead to calls for redistribution, but because the rich tend to buy government bonds in disproportionate numbers, levelling the income distribution may reduce the scope for a fiscal free lunch. That also means, the authors note, that efforts to address wide deficits through progressive taxes may not bear much fruit: taxes on high earners will Hoover up money that might be used to buy bonds.

Analyses such as these are trying to understand circumstances outside of historical experience, and necessarily come with large uncertainties and assumptions attached. Budget-setting politicians too have uncertainties to navigate, and must do so carefully. Government borrowing plays a starring role in today's macroeconomic zeitgeist. A balance of sorts is still required, between making good use of the government's capacity to borrow, and acknowledging that limits to public borrowing are not so distant that they can be ignored altogether. ■



Inventing the future

Cloning DARPA

A growing number of governments hope to copy the famous research agency

USING MESSENGER RNA to make vaccines was an unproven idea. But if it worked, the technique would revolutionise medicine, not least by providing protection against infectious diseases and biological weapons. So in 2013 America's Defence Advanced Research Projects Agency (DARPA) gambled. It awarded a small, new firm called Moderna \$25m to develop the idea. Eight years, and more than 175m doses later, Moderna's covid-19 vaccine sits alongside weather satellites, GPS, drones, stealth technology, voice interfaces, the personal computer and the internet on the list of innovations for which DARPA can claim at least partial credit.

It is the agency that shaped the modern world, and this success has spurred imitators. In America there are ARPAs for homeland security, intelligence and energy, as well as the original defence one. President Joe Biden has asked Congress for \$6.5bn to set up a health version, which will, the president vows, "end cancer as we know it". His administration also has plans for another, to tackle climate change. Germany has recently established two such agen-

cies: one civilian (the Federal Agency for Disruptive Innovation, or SPRIN-D) and another military (the Cybersecurity Innovation Agency). Japan's interpretation is called Moonshot R&D. In Britain a bill for an Advanced Research and Invention Agency—often referred to as UK ARPA—is making its way through Parliament.

An agency needs agency

As governments across the rich world begin, after a four-decade lull, to spend more on research and development, the idea of an agency to invent the future (and, in so doing, generate vast industries) is alluring and, the success of DARPA suggests, no mere fantasy. In many countries there is displeasure with the web of bureaucracy

that entangles funding systems, and hope that the DARPA model can provide a way of getting around it. But as some have discovered, and others soon will, copying DARPA requires more than just copying the name. It also needs commitment to the principles which made the original agency so successful—principles that are often uncomfortable for politicians.

On paper, the approach is straightforward. Take enormous, reckless gambles on things so beneficial that only a handful need work to make the whole venture a success. As Arun Majumdar, founding director of ARPA-E, America's energy agency, puts it: "If every project is succeeding, you're not trying hard enough." Current (unclassified) DARPA projects include mimicking insects' nervous systems in order to reduce the computation required for artificial intelligence and working out how to protect soldiers from the enemy's use of genome-editing technologies.

The result is a mirror image of normal R&D agencies. Whereas most focus on basic research, DARPA builds things. Whereas most use peer review and carefully selected measurements of progress, DARPA strips bureaucracy to the bones (the conversation in 1965 which led the agency to give out \$1m for the first cross-country computer network, a forerunner to the internet, took just 15 minutes). All work is contracted out. DARPA has a boss, a small number of office directors and fewer than 100 programme managers, hired on fixed short-term contracts, who act in a manner

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akin to venture capitalists, albeit with the aim of generating specific outcomes rather than private returns.

The first challenge for the new ARPAS is to secure the breathing space required for such experimentation. SPRIN-D illustrates how difficult this can be. The concept was approved by Germany's cabinet—"and then the Federal Court of Auditors came along," sighs Barbara Diehl, SPRIN-D's chief partnership officer. After the auditors issued their recommendations, the agency lost its exemption from standard public-sector procurement rules and pay scales, restricting who it could hire and the sorts of risks it could take. Existing government ministries exert influence through the agency's board, stymying radicalism, says Ms Diehl. Dominic Cummings, a former aide to Boris Johnson, Britain's prime minister, who demanded a British agency as a condition of his employment, has said he is concerned by the provisions for ministerial oversight in the legislation creating it.

Without freedom from political interference, the risk-taking instincts of those at the cutting edge are curbed. The administrative and research directors of Germany's Cybersecurity Innovation Agency recently quit, frustrated by political interference. In America the homeland-security ARPA was established in 2002, but has been hamstrung by power struggles in the department that gave it its name. "It has never been allowed to make independent decisions, it has never been allowed an independent budget," says an observer. There is a debate about whether the Biden administration's health ARPA (ARPA-H) ought to stand alone, or be part of the National Institutes of Health (NIH). The latter would be less of a legislative challenge, but may infringe its independence.

Progress report

DARPA's budget in 2020 was \$3.6bn, equivalent to just 8% of the NIH's. If all goes to plan, ARPA-H will be on a similar scale, but none of the others receives such funding (ARPA-E got \$425m last year, roughly as much as one of DARPA's six offices). Since the model works by making lots of bets in the hope that a few will come off, stingier funding means fewer wagers, which reduces the chance of success and thus of continued political support. This is especially true given the difficulty of measuring progress. As a paper by Pierre Azoulay of the Massachusetts Institute of Technology (MIT) and his colleagues notes: "It is impossible to accurately measure the incidence of one-in-a-thousand ideas, much less one-in-a-million ideas, on a timescale relevant to political decision-making."

The new agencies must also work out how to get their innovations out of the lab. There is a close relationship between DARPA and the Department of Defence, which

is a customer for its work. But other agencies lack such a pipeline. Research by Anna Goldstein at the University of Massachusetts, Amherst, and her colleagues finds that, although new "cleantech" companies sponsored by ARPA-E produce more patents than others, they are not more likely to raise venture capital, be acquired by larger firms or list on public markets. So far, at least, the agency's innovations have struggled to leap into the real world.

When ARPA-E began in 2009 the hope was that venture capitalists would pick up innovations emerging from it. They have proved reluctant. Energy technologies take far longer to reach the market than venture capital's favourite investment, software. ARPA-E has thus tweaked the DARPA model to add a "tech-to-market" team, to guide projects through the industrial jungle. Last year it began handing out grants of up to \$150,000 to promising previous award-winners seeking to grow. William Bonvillian, a science-policy expert at MIT, suspects one missing ingredient is simply time: "We created the internet in '69. It didn't scale up until '91 or '92. So we've just got to get used to it taking a while."

ARPA-H may face similar difficulties. It is based on the idea that the NIH is too conservative, focusing on biology at a time when many life-science breakthroughs happen where biology, chemistry and computer science meet. Mikko Packalen and Jay Bhattacharya, of Waterloo and Stanford universities respectively, provide supportive evidence, finding that the NIH's funding of work building on new advances has declined. ARPA-H's other goal, though, is to pump money into treatments for rare diseases, eschewed by the private sector because of limited moneymaking opportunities. As with ARPA-E, this lack of commercial interest may make the transition from innovation to the real world tricky.

Michael Stebbins, who was an official in Barack Obama's administration, and is an advocate for ARPA-H, hopes that someone from DARPA can be recruited to lead the new agency. Replicating DARPA's free-wheeling culture is such a challenging task that there have been times when DARPA itself has failed. It went through a fallow period in the late 1960s and early 1970s, and many feel its ambitions have been trimmed back in recent decades—minimising failures, but also successes.

The defence focus also has an inbuilt advantage. By failing to build a terrible weapon, American leaders can reassure themselves that their adversaries won't either. There is no such reassurance in failing to cure cancer. But that has not been enough to dissuade politicians in America, Britain, Germany and Japan. The lesson many have learnt from DARPA is that mere difficulty is no reason to avoid something. It may even be a reason to do it. ■

Composing by computer

Programmes by programs

Concerts may soon feature music written by artificial intelligence

THESE DAYS, anyone with a computer can be a composer. Sort of. Give a piece of commercial software such as Magenta, developed by Google, the first few notes of a song, and it will make something merrily tuneful out of them. Tuneful, but not so sophisticated. At least, that is the view of Gerhard Widmer of Johannes Kepler University, in Linz, Austria.

In Dr Widmer's opinion, "what they create may contain certain statistical properties. It's not dissonant, but it's not actually music...It would create a piece that would last three days because it has no notion of what it wants to do. It doesn't know that things need an end, a beginning, and something in-between." He thinks he can do better. He wants to use artificial intelligence to explore how toying with a listener's expectations affects the perception of music, and then to employ that knowledge to create software which can produce something more akin to Beethoven than "Baa Baa Black Sheep". That means giving computers an ability to perceive subtleties they cannot currently detect but might, using the latest techniques, be able to learn. To this end, Dr Widmer is running a project called "Whither music?"—a title borrowed from a lecture series given at Harvard Uni- ▶▶



Play it again, Nikita

► versity in 1973 by Leonard Bernstein, a celebrated 20th-century composer.

When human beings listen to music, they subconsciously predict what the next note will be. One trick composers use is to toy with these expectations—sometimes delivering what is expected and sometimes deliberately taking an unexpected turn. Performers then enhance that emotional manipulation by adding expression—for example, by playing a particular phrase louder or more staccato than the one which came before. One thing Dr Widmer is doing, therefore, is teaching computers to copy them.

To this end, he and his colleagues have amassed a huge body of recordings captured on specially designed instruments, notably the Bösendorfer 290 SE, a type of concert piano made in the 1980s which was rigged by the manufacturers with sensors that measure the force and timings of the pianist's key-pressing with great accuracy. The jewel of their collection is a set of performances on a 290 SE by Nikita Magaloff (pictured), a legendary concert pianist and Chopin expert, of almost all of Chopin's solo piano work. These were recorded at a series of six concerts which Magaloff gave in Vienna, shortly before his death in 1992.

The team's software takes data from these and other, humbler recordings and compares them with the score as written by the composer. It is looking for mismatches between the two—places, for instance, where the performer misses the beat by a few milliseconds or plays a note more forcefully than the score indicates. By analysing thousands of performances and comparing them with digitised versions of the composers' scores, the software learns what performers are choosing to accentuate when they play, and thus what those performers think is particularly interesting to the audience.

Other algorithms are being taught the rules of composition. “[Existing software models] take all the past notes that have already been played and predict the next note, which has nothing to do with how a human composer would compose,” Dr Widmer explains. “Composition is a planning process that involves structure. We want to create models that make predictions at several levels simultaneously.” The team are designing and training individual modules for different elements of music: melody, rhythm, harmony and so on—with the intention of combining them into a master program that can be trained on performances and scores *in toto*.

Once complete, the resulting megabyte maestro will decide not just which note follows which, but why that should be so and how that note should be played. “Instead of saying, ‘the next note is statistically likely to be a C’, it would say, ‘I believe that the next four bars will feature some

kind of IV-I-V harmony [a common type of chord progression in Western music], because we had a similar pattern in a similar melodic context earlier in the piece.”

Software of this sort might have applications beyond composition. Existing “recommender” algorithms struggle to generate musical playlists that appeal to particular tastes. A recent paper showed that they are good at suggesting pieces for fans of pop music with catholic appetites, but not for those who prefer a specific genre, such as heavy metal or rap. Software that understands musical expectancy might do a better job. A program which knows what to listen out for might discover that the music of Skepta or Slayer has specific types of musical surprises within it, and, on this basis, be able to recommend new music with similar surprises.

Whether computer software will ever be able to write music that stands up to comparison with the likes of Chopin or Cream remains to be seen. Dr Widmer remains sceptical, but it is hard to see why. Great art is often a product of knowing when to obey the rules and when to break them. And that is exactly what he is teaching his machines. ■

Cicadas, insecticides and children

A brooding problem

The return of periodical cicadas bodes ill for children's well-being

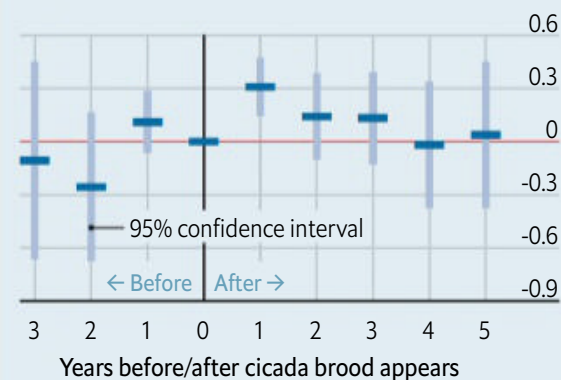
AS SUMMER APPROACHES, adults of cicada Brood X, last seen in 2004, have begun emerging in the eastern United States. Their return is welcome news for entomologists who study them, and for adventurous chefs in search of novel ingredients. It could, though, have bad consequences for unborn infants and young children in the places where they live.

The cicadas themselves are harmless to people, but their nymphs feed on the roots of woody plants such as apple trees. Farmers, understandably peeved by their uninvited guests, respond by spraying those trees with large quantities of pesticides to stop the adults mating. This chemical warfare successfully curbs the insects, but, according to new working paper by Charles Taylor of Columbia University, it may also have adverse consequences for children.

Mr Taylor, who studies environmental and health economics, started his investigation by collecting, on a county-by-county basis, data stretching back from 2016 to 1950 for the parts of America where periodical cicadas live. There are, altogether, 15 such broods; 12 of them emerge as adults

Cicadian rhythm

US, change in infant mortality in apple-growing counties, deaths per 1,000 births, 1995-2016



Source: “Cicadian rhythm: insecticides, infant health and long-term outcomes”, C. A. Taylor, CEEP working paper, 2021

every 17 years (of which Brood X is the largest) and three every 13 years, in a phenomenon known as predator swamping. Lacking good information on pesticide use, Mr Taylor used the abundance of apple trees in a county as a proxy for how much of the stuff farmers were likely to deploy in a brood year. He also studied local health and education records for brood years and non-brood years. The results are disturbing.

Mr Taylor's analysis found that in the year immediately after the emergence of periodical cicadas, infant-mortality rates would increase by 0.3 deaths per 1,000 live births in counties which have lots of apple trees (see chart). That represents a 5% increase over America's national rate of six deaths per 1,000 births. No such change was seen in non-apple-growing counties.

Cicada-driven pesticide spikes seem to harm cognitive development, too. Primary-school pupils (those aged roughly eight to ten) who lived in counties which saw emergences of periodical cicadas while those children were in their mothers' wombs later fared worse than others on standardised exams. Mr Taylor estimates that these pupils, in effect, lose around 10% of a grade-year's-worth of learning. The study finds, too, that high-school pupils are around 5% more likely to drop out of school in their 12th grade (ie, at the age of 17-18) if they live in a county that was affected by a cicada event 19 years earlier, when they were *in utero*. That suggests pesticide use does indeed hurt long-term cognitive development.

Mr Taylor's study focuses on the use of pesticides on a single crop, apples, against a single foe, cicadas. If his results are accurate, they suggest that quite modest exposure to pesticides can have a serious effect on unborn infants—for even in counties where apples are an important crop, orchards cover only a small fraction of the land, meaning that tree-spraying is not dumping huge amounts of pesticides into the environment. What that implies for the effects of other, more extensive pesticide uses would certainly bear investigation. ■

Forensic science

Where were you on Thursday the 15th?

Testing alibis is not as straightforward as it seems

IN 1985 RONALD COTTON, a resident of North Carolina, was falsely convicted of rape and burglary, and sentenced to life imprisonment. Nearly a decade later, he was exonerated on the basis of DNA evidence. Not only did the victim make an error in identifying him as the perpetrator, but Mr Cotton had also provided an alibi that could not be corroborated.

This, it turned out, was because he was wrong about where he had been when the crime was committed. A subsequent investigation showed that he had, in error, instead told the police where he was at that time on the same day during the week before. An unfortunate confusion, then, with serious consequences. But, if research just published in *Psychological Science* is to be believed, one that might be commoner than imagined.

Aware of Mr Cotton's case, and of estimates that about 1% of America's prison population are innocent of the offences they are serving time for, Yim Hyungwook of Hanyang University, in South Korea, and Simon Dennis of the University of Melbourne, in Australia, wanted to understand better how people remember details about where they were when in the past. They hoped they would thus be able to identify common mistakes that people make about such matters, so that they could bring these to the attention of detectives and defence lawyers, and therefore help keep innocent people out of jail.

To this end, they recruited 51 volunteers and asked them to download an app onto their smartphones, to collect information about their lives over the course of four weeks. The app tracked the phone's location using GPS, and made recordings, from time to time, of nearby sounds.

A week after the experiment ended, participants were asked to take a memory test. They were presented with electronic maps that had four markers on them, and were asked 72 questions of the form, "click the marker where you were on Thursday morning 8am on August 15th". They were allowed to zoom into the maps and take a look at the names of streets and venues in the area, but were not allowed to use the "street view" facility or to refer to any other information, such as past appointments noted on the calendar of their phone. After selecting a marker, they were asked to rate how confident of their answer they were, on a scale that ranged from one (not at all

confident) to five (very confident).

Dr Yim and Dr Dennis found that participants got things wrong about a third of the time, and further examination of the data revealed that these errors were not random. People were more likely to remember events incorrectly if they were similar in time or space than they were if they were not. Specifically, they chose the right day of the week but the wrong week 19% of the time, and the right hour of the day but the wrong day 8% of the time.

Analysis of the audio files revealed that they were also more likely to make errors when two locations had similar acoustic

environments. And when participants were confident of their answer, they were almost always right, and when they were not at all confident, they were much more likely to be wrong.

None of these findings is, it is true, that surprising. But they are, nevertheless, novel—and are the sorts of things that detectives and lawyers need to be aware of. How common it is for mistaken imprisonment, or worse, to happen as it did to Mr Cotton on the basis of alibi claims that could not be proved because they were themselves mistakes, is unknown. But that is because, until now, no one has had reason to ask. ■

The origin of watermelons

Sweetness and light

A popular fruit started off in Darfur

THE ORIGINS of some crops are well known. Maize derives from a wild grass growing in the Balsas river valley, in what is now Mexico. Rice descends from another grass, native to the Yangzi basin. Potatoes hail from the border between Peru and Bolivia. Apples trace back to the woodlands of southern Kazakhstan. Some crops' beginnings, though, are lost in the mists of time—among them those of the watermelon.

That watermelons' ancestors are African has long been clear. Archaeological evidence from Libya and Egypt suggests they were cultivated there thousands of years ago, and the continent is home to seven species and numerous subspecies of plants classified in the same genus, *Citrullus*, as the cultivated crop. But only now has a likely candidate been nailed down. An examination of available genetic data about members of *Citrullus*, published in the *Proceedings of*

the National Academy of Sciences by Susanne Renner of Washington University, in St Louis, and Guillaume Chomicki of the University of Sheffield, in Britain, has led them to conclude that watermelons were domesticated from a subspecies called the Sudanese Kordofan melon, which grows in Darfur, the western part of Sudan.

Tellingly, this is one of the few wild members of *Citrullus* that is bland, rather than excruciatingly bitter to the human palate. That ties in with a reinterpretation by the two researchers of a 4,450-year-old Egyptian tomb painting (pictured). The previous assumption had been that early cultivated watermelons were too bitter to eat raw, and would thus need to be cooked and sweetened for consumption. This painting, though, shows what appears to be a stripped watermelon being served raw at a table decorated by lotus flowers.



A table fit for a pharaoh



Dutch colonial rule

Return of the repressed

AMSTERDAM

An exhibition in the Netherlands illuminates the country's history of slavery

IN 1881 SOMEONE donated an antique brass circlet to the Rijksmuseum, the Dutch national museum of art and history. The object (pictured) is a bit of a stumper. Engraved with a heraldic shield and the year 1689, it bears no indication of what purpose it served. The museum staff listed it as a dog collar.

They could have investigated more thoroughly. Scattered through the Rijksmuseum's collection are paintings showing similar collars worn not by dogs, but by young black men. Referred to as "Moors", they were routinely kept as servants in wealthy 17th-century Dutch households, a sideline of the vast European human-trafficking operation that carried millions of enslaved Africans to the Americas.

Slavery was not a distant memory in 1881. On some Dutch colonial plantations it had ended just a decade earlier. Yet a curator at the Rijksmuseum apparently failed to make the connection. Had Dutch society really forgotten such objects? Or was it trying not to see them?

The collar is on display in the museum's new exhibition on the history of enslave-

ment in the Netherlands and its former colonies. (King Willem-Alexander opened the exhibition in May, but the museum remains closed until June 5th due to covid-19 restrictions.) It is part of a broad movement to re-examine the country's colonial past. The Netherlands ruled Indonesia, Suriname, Curaçao and several other Caribbean islands from the 1600s until the mid-20th century, first through its East India and West India Companies (the *voc* and *gwc*) and later directly. Slaves laboured on coffee, spice and sugar plantations through to the 1860s. During their Golden Age of painters and tulips, the Dutch were among the world's leading slavers, conquering forts in west Africa to seize the trade from the Portuguese.

In modern times the Dutch have played

down this history. But that has become harder as the Netherlands has grown more multicultural. The biggest Dutch immigrant communities come from Morocco and Turkey, but those from Suriname, the Caribbean and Indonesia make up about 5% of the population. Arguments over "Zwarte Piet" (a blackface tradition associated with the St Nicholas Day holiday) and Black Lives Matter have riven Dutch politics. For the Rijksmuseum, bringing the other side of the colonial past into view is a condition for staying relevant.

One challenge in staging an exhibition on slavery is a lack of physical material. "Enslaved people were not allowed to own objects, they were not allowed to write, they were hardly ever depicted," says Valika Smeulders, the Rijksmuseum's chief historian, who hails from Curaçao. The museum redresses this by uncovering traces in its collection that had gone unnoticed. In Bartholomeus van der Helst's painting of an Amsterdam shooting company from 1639, an unidentified black youth stands at the centre. Rembrandt's opulent portraits of Marten Soolmans and Oopjen Coppit are well known; less so is that their wealth came in part from the slave-driven sugar trade.

A second technique is to examine everyday objects from the slave economy, such as plantation bells. For slaves they could be a relief or an omen, signalling the end of the day and the weighing of the harvest, which might presage a beating if the quota was not met. The logo of the *gwc*, a ▶▶

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▶ nostalgic sight on old canal houses in Dutch cities, takes on a different aura once you have seen it on a branding iron used on humans. Other objects testify to the perseverance of enslaved people: a botanist's samples from Suriname in 1687 include sesame and okra, African crops that must have been planted by captives. Oral history adds another layer. Songs from Suriname, Curaçao and South Africa (originally a Dutch colony) sound like lullabies, until you hear the translations. *Shon ta bende nos, mama, katibu ta galina*: "The landlord sells us, mama, slaves are chickens."

The exhibition is structured around the stories of ten individuals, five connected to the functioning of the slave system and five embodying resistance against it. The direct testimony of Wally, a slave in Suriname, exists because he was interrogated in court. He and four others were gruesomely executed in 1707 after they ran off into the jungle in protest at tough new work rules. Works by Dirk Valkenburg, a painter dispatched by the absentee owner in Amsterdam to record his plantation, provide visual context. Valkenburg's depiction of what looks like a holiday celebration is magnificent: the revellers leap from the canvas, individual and compelling. It is all the more shocking to read that this seemingly empathetic painter had condemned Wally, calling him a "troublemaker".

Some of the history in the exhibition is path-breaking. The Dutch tend to identify slavery with the Americas, but another huge branch of the trade shipped captives from the Ganges delta to Indonesia, whence they might be sold on to South Africa or occasionally the Netherlands itself. The attention to enslaved Africans and Asians in Holland is new, too. Slavery was illegal in the Dutch homeland, but slaves brought there remained in servitude, perhaps because they had few options.

Some found their way into Dutch society nonetheless. One was Paulus Maurus, a servant of the wealthy Nassau La Lecq clan, an offshoot of the Dutch royal family. Church records show that he became a cavalry drummer in the regiment of the Netherlands' top commander, and that he married a Dutch woman in 1684 and had a child. A painting of Dutch cavalry decades later shows just such a mounted black drummer, wearing what seems to be a metal collar. Indeed, the engraved shield on the brass collar from 1689 seems to belong to the house of Nassau La Lecq. The case is circumstantial, but it may have been Maurus who wore it.

What drove this system was money. The exhibition could do with a bit more economics, but it makes clear that the financial incentives were immense. In 1621 Jan Pieterszoon Coen, an officer of the VOC, massacred 14,000 of the 15,000 inhabitants of the Moluccan island of Great Banda, at

the time the world's chief source of nutmeg, and replaced them with imported slaves. He did so to secure a monopoly on a spice that sold for hundreds of times as much in Europe as in South-East Asia.

All this is grim, but it is also riveting. That makes the relative unfamiliarity of the history of slavery, a central aspect of European colonialism, even harder to explain. Many Europeans feel that slavery gets too much attention, that it took place long ago and has nothing to do with them. The resentment gives away the game. In the colonial age, the voices of slaves were silenced because hearing them might upend the socioeconomic system. Later, they were silenced because hearing them makes the heirs of that system feel guilty. Yet as psychotherapists know, the truth is more interesting than the silences and fables under which it is concealed. ■

Decision-making

Noise pollution

Noise. By Daniel Kahneman, Olivier Sibony and Cass Sunstein. *Little, Brown*; 464 pages; \$32. *William Collins*; £25

NOISE IS UNWANTED variation in judgments that should be identical, which leads to inaccurate and unfair decisions. It is all around people all the time, though individuals fail to notice it. To get a sense of how it happens, perform a "noise audit" right now: open your phone's stopwatch app and practice counting ten seconds. Now, with your eyes closed, count several times, hitting the lap button each time you believe ten seconds have elapsed.

Your answers weren't perfect but noisy:

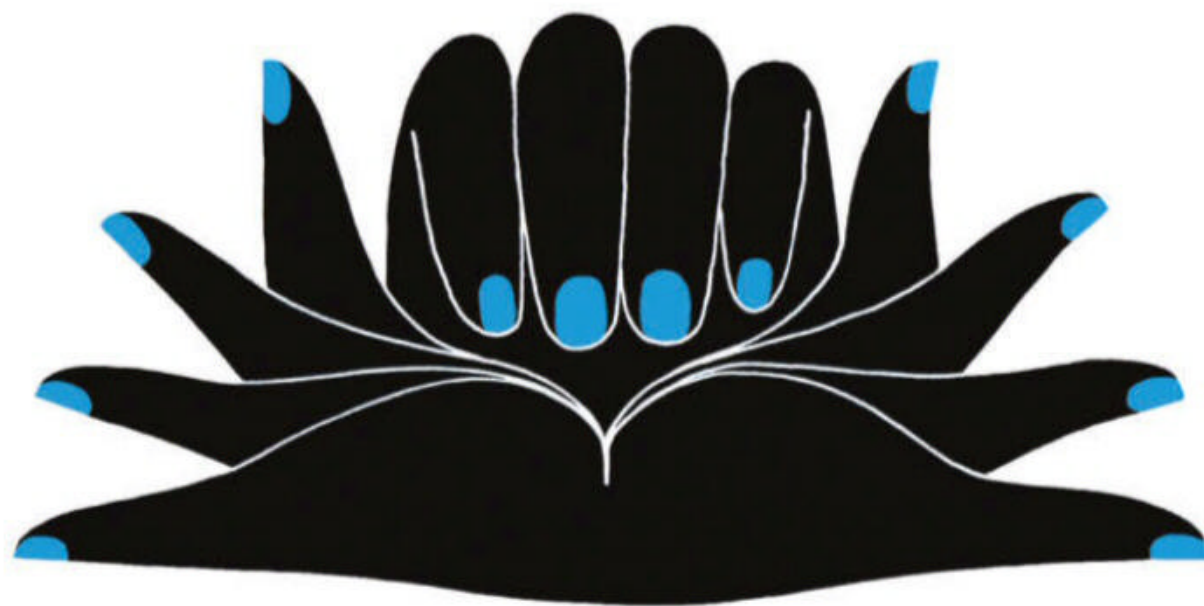
slightly above or below the ten-second mark. And if they were consistently wrong in one direction, then there is bias too, which is a different form of error (you counted too quickly or slowly).

The problem of bias in decisions is well known and there are strategies that people can adopt to minimise it. For example, customers may be "anchored" on the first price they are presented with in a transaction, so they learn to consciously discard it before they negotiate. But noise is different precisely because it is less apparent. "It becomes visible only when we think statistically about an ensemble of similar judgments. Indeed, it then becomes hard to miss," Daniel Kahneman, Olivier Sibony and Cass Sunstein write in their new book.

The divergences are stark. In a courthouse in Miami, one judge would grant refugees asylum in 88% of cases while another would do so 5% of the time. A large study of radiologists found that the false-positive rate ranged from 1% to 64%, meaning that two-thirds of the time, a radiologist said a mammogram showed cancer when it was not cancerous. Doctors are more likely to prescribe opioids at the end of a long day. Judges made harsher decisions leading up to their breaks and on hotter days. An insurance firm's underwriters assessed premiums that varied by 55%, a difference that was five times greater than its management had imagined.

Not only do individuals differ with their peers, they often fail to agree with themselves. Wine experts tasting the same samples for a second time scored fewer than one in five identically. Four out of five fingerprint examiners altered their original identification decision when presented with contextual information that should not have been a factor in matching prints. In one medical study, assessing angiograms, physicians disagreed with their earlier judgments more than half the time.

Noise is sometimes good. When different investors size up a trade or book re-▶▶



viewers reach different assessments, the diversity of opinion is beneficial. But more commonly it creates problems. In law noise means unfairness. In business it can be costly.

Yet it can be reduced. The authors' remedies include a "noise audit" to measure the degree of disagreement on the same cases, to quantify the variation that is usually invisible. They also call for better "decision hygiene" such as designating an observer for group decisions, to prevent common biases and noisy judgments. For example, they can ensure that participants in

a team reach independent assessments before coming together as a group to aggregate their decisions.

Another solution is to dispense with people altogether. Statistical models, predetermined rules and algorithms in many cases are more accurate than human judgment. The authors welcome artificial intelligence to make many decisions in society, but acknowledge that people are predisposed to resisting their answers, for lack of the personal, emotional quality in decision-making—even if it leads to inferior, or at least variable, decisions.

The trio speaks with credibility. Mr Kahneman is a Nobel laureate whose ideas on bias in human reasoning have reshaped economics and society; Mr Sunstein is a polymath scholar at Harvard and occasional government official putting his ideas into policy; Mr Sibony is a former McKinsey partner who teaches decision science at a French business school. Yet despite the book's title, the authors struggled to extract the signal from the noise, so to speak, needing some 400 pages to make their case. A tighter argument would have enhanced the ideas they present. ■

Johnson One giant leap for humankind

Google intervenes in the argument about masculine generics

IN THE 1990s parodies of Clippy from Microsoft Word were a bit of a trend in cartoons and magazines. The annoying paper-clip-shaped figure would pop up as soon as you began writing "Dear..." and say: "It looks like you're writing a letter," before offering unsolicited advice on things such as formatting.

Two decades later, various automatic aids to writing, including spelling and grammar-checkers, are much better. They are both more discerning—powered by artificial intelligence rather than manually programmed—and more subtle in their operations. Many writers are grateful for their interventions.

But now tech companies are wading into trickier waters. In 2020 Google's internal style guide was updated, encouraging developers to eschew "unnecessarily gendered language" in their documentation. Rather than referring to "man hours", for example, a coder might discuss the "person hours" involved in a project. "All of mankind" could be replaced with "all of humanity", the guide's authors suggested.

On May 18th the company announced that it was going further in its promotion of inclusive language. Google Docs, its popular free word-processing software, would soon be nudging people away from potentially sexist language, such as the generic use of "chairman". Instead it will offer gender-neutral suggestions including "chairperson".

The tech company is right to see a problem. Though it doesn't fit in the same category as spelling errors or grammatical quandaries, sexist bias is shot through the English language, as well as others. Consider the lack of female equivalent for "master" that lacks unpleasant secondary meanings. "Slut" and "whore" are the types of slurs so gen-



dered they are rarely hurled at men.

Google's target, though, is the so-called generic masculine. For a long time English-language traditionalists said that "the masculine includes the feminine". Under this rule, "everyone has his own opinion" is gender-neutral, and there is nothing wrong with generic chairmen, airmen and firemen. (In other languages, mixed or unknown persons are referred to in the masculine, too.) But using words like "chairman" and "sex-neutral 'he'" are not truly gender-neutral: a stack of research proves that when people read those terms they are much more likely to picture a man than a woman.

In some European countries, feminists have called for feminised job titles, so that a woman president in Spain is now "la presidenta" and not "el presidente". But Anglophone feminists have argued the other way, abjuring rather than recommending specific, feminised titles like poetess and actress. And this does not solve the problem of what to do with a generic referent, where languages still tend to default to the masculine.

A solution in English is to prefer newer, genderless titles like "mail carrier" and "police officer". But even here there are difficulties. Some titles seem especially ugly in this form: no one seems to love (and therefore want to adopt) "chairperson" and even though "chair" is fine for some observers, others cannot see past the piece of furniture. There is further disagreement over whether such forms should be universal or whether it is acceptable to call a male officer a "policeman".

With this much unsettled, tech companies are walking a difficult line. There is growing acceptance that sexist language is a problem; at the same time, there is also a widespread belief that the tech giants are becoming too powerful, and are making policy decisions that are momentous in users' daily lives without enough clarity or insight into how those decisions were reached.

All big companies are under increasing pressure not just to sell their widgets but to take a stance on the hot-button issues of the day. Often they find that trying to please one constituency outrages another; trying later to split the difference outrages the first one again, and so on. Companies that make coffee machines or shoes have already run into these problems. When the tech giants weigh in on politics, their huge influence virtually guarantees a backlash from one party or another.

There are good things tech companies can do for inclusivity: at the same conference at which the language changes were announced, Google said it would improve its smartphone cameras' handling of black and brown skin. But in language, the solutions are less obvious—even among people who agree on the problem.



Going postal

How the West was won

A new book offers a timely reminder that the post has always been political

Paper Trails. By Cameron Blevins.
Oxford University Press; 248 pages;
\$34.95 and £22.99

BEFORE COLORADO was a territory, let alone a state, it had post offices. The first opened in 1859 in Auraria, a mining settlement founded by migrants from the South searching for gold. Life could be unpredictable west of the Mississippi. Gold failed to materialise, drought ruined farmers and settlers clashed with Native Americans. Soon Auraria merged with a rival company town—Denver City. Today a sprawling university campus stands on its location. Amid all the upheaval, argues Cameron Blevins, a historian at the University of Colorado-Denver, one feature remained constant: the postal service.

Rather than focusing on ideas that were spread by the post, in “Paper Trails” Mr Blevins considers the infrastructure of the agency itself. Using a database compiled by Richard Helbock, a postal historian, he charts the rapid opening and closure of post offices in the second half of the 19th century—thereby tracing America’s westward expansion.

The maps in the book are telling. In 1864 there were few branches on land controlled by Native Americans, which still accounted for most of the West. Over the next 25 years, as indigenous people were killed or forced onto government reservations, the dots representing post offices multiply exponentially (see map). Using these as a

proxy for settlement, Mr Blevins regards colonisation of the West as a result of big government rather than rugged individualism. As federal subsidies and land grants coaxed easterners into the mountains, deserts and high plains of Indian Country, the post kept them connected.

In the mid-19th century the Post Office Department (as the United States Postal Service was formerly known) was far from a centralised bureaucracy. To keep up with migration patterns, postal services were grafted onto existing businesses. The federal government commissioned private stagecoaches to carry the mail, and granted

short-term contracts to local businessmen (and sometimes women) to act as town postmasters. These flexible partnerships enabled the mail quickly to follow migrants, helping knit together far-flung parts of a vast country.

“Paper Trails” is a reminder that, long before the recent wrangles over postal voting, the post was political. Until 1971 the postal service was a cabinet-level department in the executive branch, and jobs within it were doled out as patronage. Of the 80,000 appointments submitted to the Senate for approval between 1829 and 1917, nearly 62,000 were for post-office jobs. The facilities themselves were often turned into de facto campaign headquarters where partisans wooed voters. Congressmen were frequently caught up in rows over who should be postmasters in their districts. A friend of Jules Sandoz, a Nebraska postmaster, voiced his exasperation with postal politicking: “Why did you have to spend your whole life fighting over stupid things like post offices, Jules?”

For all that, the existence of the 19th-century postal service was not itself divisive. Democrats and Republicans alike stuffed the department with supporters; to please constituents, congressmen from both parties sought more routes in their districts. Today the post remains popular: last year 91% of Americans viewed the agency favourably. Yet Donald Trump and Republican legislators were contemptuous of it, and of postal voting in particular.

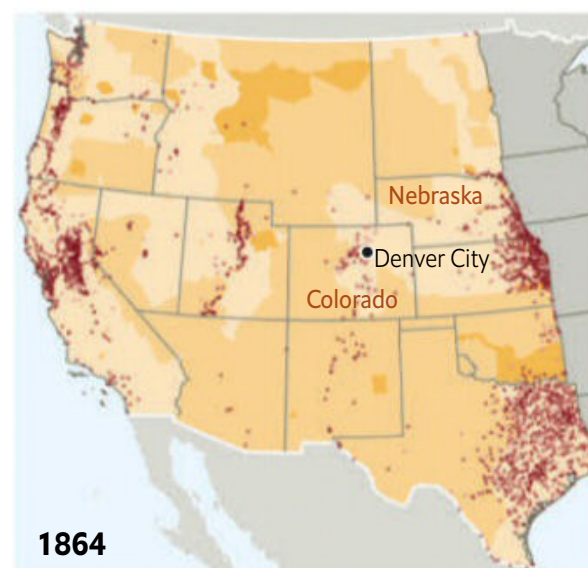
One of the most striking aspects of “Paper Trails” isn’t in the book. Mr Blevins is a digital historian, meaning he uses data science to analyse historical trends. He built an accompanying website replete with interactive maps to show readers how, within a generation, the postal service helped colonise a continent. These online dispatches beautifully illustrate the formative power of snail mail. ■

Go West, young postman

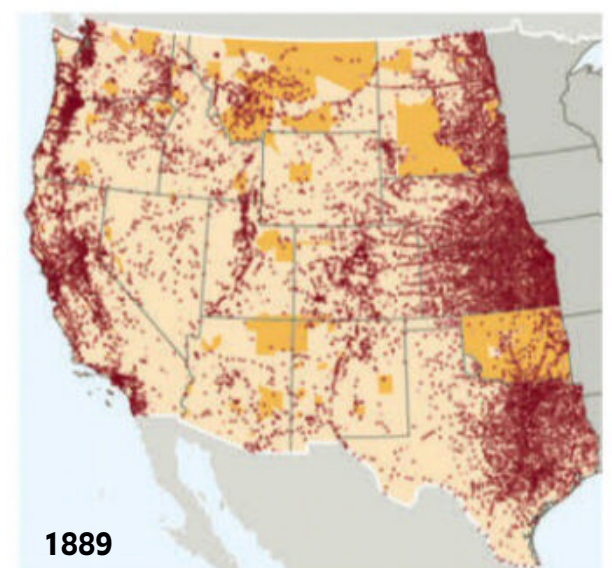
United States, post offices* in the West

■ Native American reservations

■ Unceded Native American land



1864



1889

Source: Cameron Blevins, Oxford University Press

*Post offices for which exact locations could not be determined are randomly distributed within the county in which they operated and are displayed in a lighter colour



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**REPUBLIC OF MAURITIUS
MINISTRY OF HEALTH & WELLNESS**

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Ministry of Health & Wellness, Republic of Mauritius invites international bids on item rate basis through their Consultants HSCC (India) Limited from eligible contractors/firms for the following works:

Name & Description of Work	Estimated Cost (in Mauritian Rupees)	Tender Documents available for sale and Last date of submission & opening of Tender	Bid Security (in Mauritian Rupees)
Construction of Eye Hospital at Mauritius.	737.17 Million	From 07.06.2021 to 08.07.2021 upto 15:00 hrs and opening on 08.07.2021 at 15:30 hrs.	8.37 Million

Completion period is 18 calendar months.

For tender details, please refer detailed NIT on HSCC website <http://www.hsccltd.co.in>, <https://www.dgmarket.com> and Republic of Mauritius websites www.health.govmu.org and publicprocurement.govmu.org. The **pre-bid meeting** shall be held on 21.06.2021 at 15:00 hrs at Consultant's Office – HSCC India Limited, E- 6(A), Sector-1, NOIDA- 201301, Uttar Pradesh, India. For bid submission and other details refer to the detailed NIT.

Ministry of Health & Wellness, Republic of Mauritius/ HSCC reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

Prospective bidders are advised to regularly scan through HSCC website <http://www.hsccltd.co.in>, <https://www.dgmarket.com>, www.health.govmu.org, and publicprocurement.govmu.org as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

**Deputy Permanent Secretary,
REPUBLIC OF MAURITIUS, MINISTRY OF HEALTH & WELLNESS**

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Economic data

	Gross domestic product				Consumer prices			Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago				% change on year ago			%		% of GDP, 2021†		% of GDP, 2021†		10-yr gov't bonds	change on	per \$	% change
	latest	quarter*	2021†		latest	2021†								latest,%	year ago, bp	Jun 2nd	on year ago
United States	0.4	Q1	6.4	6.0	4.2	Apr	2.7	6.1	Apr	-2.9		-13.5		1.6	91.0	-	
China	18.3	Q1	2.4	8.5	0.9	Apr	1.6	5.1	Apr ^{‡§}	2.7		-4.7		2.9	¥	6.39	11.3
Japan	-1.9	Q1	-5.1	2.2	-0.5	Apr	0.1	2.8	Apr	3.0		-9.4		nil	-8.0	110	-0.9
Britain	-6.1	Q1	-5.9	5.3	1.5	Apr	1.5	4.8	Feb ^{††}	-4.2		-12.1		0.9	66.0	0.71	12.7
Canada	0.3	Q1	5.6	5.4	3.4	Apr	2.2	8.1	Apr	-2.0		-8.9		1.5	96.0	1.21	11.6
Euro area	-1.8	Q1	-2.5	4.1	2.0	May	1.4	8.0	Apr	3.2		-6.6		-0.2	20.0	0.82	8.5
Austria	-5.5	Q1	-12.6	3.4	2.8	May	1.7	5.6	Apr	3.4		-7.1		nil	12.0	0.82	8.5
Belgium	-0.6	Q1	4.2	3.9	1.5	May	1.5	5.3	Apr	-0.8		-7.5		0.1	8.0	0.82	8.5
France	1.2	Q1	-0.4	5.4	1.4	May	1.3	7.3	Apr	-1.8		-9.0		0.2	25.0	0.82	8.5
Germany	-3.1	Q1	-7.0	3.5	2.5	May	1.9	4.4	Apr	6.8		-3.6		-0.2	20.0	0.82	8.5
Greece	-5.9	Q4	11.1	2.5	-0.3	Apr	nil	15.8	Dec	-5.8		-5.9		0.8	-67.0	0.82	8.5
Italy	-0.8	Q1	0.6	4.1	1.3	May	1.0	10.7	Apr	3.0		-11.9		0.9	-64.0	0.82	8.5
Netherlands	-2.8	Q1	-1.8	2.9	1.9	Apr	2.0	3.4	Apr	10.8		-3.4		-0.2	4.0	0.82	8.5
Spain	-4.3	Q1	-2.1	5.6	2.6	May	1.3	15.4	Apr	1.3		-8.9		0.5	-10.0	0.82	8.5
Czech Republic	-2.4	Q1	-1.0	3.7	3.1	Apr	2.2	3.4	Apr [‡]	2.1		-5.5		1.8	104	20.9	13.8
Denmark	-1.3	Q1	-5.1	3.0	1.5	Apr	0.7	4.6	Apr	7.4		-1.3		0.1	37.0	6.09	9.4
Norway	-1.4	Q1	-2.5	2.6	3.0	Apr	1.6	4.6	Feb ^{††}	2.4		-1.7		1.5	92.0	8.31	14.7
Poland	-1.3	Q1	4.5	4.1	4.8	May	3.2	6.3	Apr [§]	2.0		-6.9		1.9	55.0	3.65	7.4
Russia	-1.0	Q1	na	3.2	5.5	Apr	5.3	5.2	Apr [§]	3.6		-1.7		7.3	160	73.3	-6.1
Sweden	-0.1	Q1	3.4	3.3	2.2	Apr	1.4	9.4	Apr [§]	4.1		-2.6		0.4	44.0	8.27	12.7
Switzerland	-0.5	Q1	-2.0	2.6	0.3	Apr	0.3	3.1	Apr	6.9		-2.4		-0.1	29.0	0.90	6.7
Turkey	7.0	Q1	na	3.9	17.1	Apr	14.5	13.1	Mar [§]	-2.2		-2.8		18.0	673	8.59	-21.6
Australia	1.1	Q1	7.3	3.4	1.1	Q1	2.1	5.5	Apr	1.9		-7.3		1.6	67.0	1.29	12.4
Hong Kong	7.9	Q1	23.5	4.9	0.7	Apr	1.6	6.4	Apr ^{††}	3.6		-4.1		1.3	70.0	7.76	-0.1
India	1.6	Q1	6.0	10.4	4.3	Apr	5.2	11.9	May	-1.0		-7.0		6.0	1.0	73.1	3.1
Indonesia	-0.7	Q1	na	3.9	1.7	May	2.5	6.3	Q1 [§]	-0.3		-6.4		6.4	-70.0	14,280	1.1
Malaysia	-0.5	Q1	na	4.4	4.7	Apr	2.4	4.7	Mar [§]	4.7		-5.9		3.2	24.0	4.13	3.6
Pakistan	4.7	2021**	na	1.7	10.9	May	9.0	5.8	2018	-1.7		-6.9		9.7	†††	114	6.8
Philippines	-4.2	Q1	1.2	5.1	4.5	Apr	5.0	8.7	Q1 [§]	-1.1		-7.6		4.0	69.0	47.8	5.3
Singapore	1.3	Q1	13.1	4.8	2.1	Apr	1.8	2.9	Q1	16.7		-4.1		1.5	65.0	1.32	6.1
South Korea	1.7	Q1	6.6	3.6	2.6	May	1.9	4.0	Apr [§]	4.6		-4.7		2.2	81.0	1,113	10.1
Taiwan	8.2	Q1	12.9	6.2	2.1	Apr	1.6	3.7	Apr	15.5		-0.5		0.5	-5.0	27.7	8.1
Thailand	-2.6	Q1	0.7	2.9	3.4	Apr	2.2	1.5	Dec [§]	4.5		-6.6		1.6	49.0	31.2	1.3
Argentina	-4.3	Q4	19.4	6.2	46.3	Apr [‡]	46.8	11.0	Q4 [§]	1.7		-6.0		na	na	94.8	-27.5
Brazil	1.0	Q1	4.9	4.2	6.8	Apr	6.8	14.7	Mar ^{§††}	-0.2		-7.3		9.2	237	5.09	2.5
Chile	0.3	Q1	13.4	6.2	3.3	Apr	3.6	10.2	Apr ^{§††}	-0.2		-7.2		3.9	166	721	8.2
Colombia	2.0	Q1	11.9	4.8	1.9	Apr	2.6	15.1	Apr [§]	-3.3		-8.9		7.0	160	3,640	-0.4
Mexico	-3.6	Q1	3.1	5.7	6.1	Apr	4.5	4.7	Apr	2.0		-2.8		6.6	44.0	19.9	8.5
Peru	3.8	Q1	8.3	10.5	2.4	May	2.6	12.6	Apr [§]	-0.3		-5.6		4.9	108	3.88	-12.4
Egypt	2.0	Q4	na	2.9	4.1	Apr	5.7	7.4	Q1 [§]	-3.3		-8.1		na	na	15.7	2.0
Israel	-1.2	Q1	-6.5	4.0	0.8	Apr	1.3	5.4	Apr	3.4		-8.8		1.2	47.0	3.25	6.8
Saudi Arabia	-4.1	2020	na	2.9	5.3	Apr	2.4	7.4	Q4	2.8		-2.6		na	na	3.75	nil
South Africa	-4.1	Q4	6.2	2.4	4.5	Apr	3.7	32.6	Q1 [§]	1.5		-9.2		8.9	16.0	13.7	25.3

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	% change on:		
	Index Jun 2nd	one week	Dec 31st 2020
United States S&P 500	4,208.1	0.3	12.0
United States NAScomp	13,756.3	0.1	6.7
China Shanghai Comp	3,597.1	0.1	3.6
China Shenzhen Comp	2,400.9	0.9	3.1
Japan Nikkei 225	28,946.1	1.1	5.5
Japan Topix	1,942.3	1.1	7.6
Britain FTSE 100	7,108.0	1.2	10.0
Canada S&P TSX	19,971.2	1.1	14.6
Euro area EURO STOXX 50	4,088.5	1.4	15.1
France CAC 40	6,521.5	2.0	17.5
Germany DAX*	15,602.7	1.0	13.7
Italy FTSE/MIB	25,379.7	2.4	14.2
Netherlands AEX	718.9	1.1	15.1
Spain IBEX 35	9,180.7	-0.2	13.7
Poland WIG	66,758.0	3.6	17.1
Russia RTS, \$ terms	1,643.7	3.3	18.5
Switzerland SMI	11,470.4	1.1	7.2
Turkey BIST	1,430.7	0.3	-3.1
Australia All Ord.	7,468.9	1.9	9.0
Hong Kong Hang Seng	29,297.6	0.5	7.6
India BSE	51,849.5	1.6	8.6
Indonesia IDX	6,031.6	3.7	0.9
Malaysia KLSE	1,597.9	1.3	-1.8

	% change on:		
	index Jun 2nd	one week	Dec 31st 2020
Pakistan KSE	48,126.9	2.8	10.0
Singapore STI	3,161.0	0.5	11.2
South Korea KOSPI	3,224.2	1.8	12.2
Taiwan TWI	17,165.0	3.1	16.5
Thailand SET	1,617.6	3.1	11.6
Argentina MERV	62,659.5	10.7	22.3
Brazil BVSP	129,601.4	4.5	8.9
Mexico IPC	50,749.6	3.4	15.2
Egypt EGX 30	10,121.0	-2.4	-6.7
Israel TA-125	1,764.3	-0.5	12.5
Saudi Arabia Tadawul	10,656.8	1.8	22.6
South Africa JSE AS	69,049.1	4.4	16.2
World, dev'd MSCI	2,986.0	0.6	11.0
Emerging markets MSCI	1,388.5	2.7	7.5

US corporate bonds, spread over Treasuries

Basis points	Dec 31st 2020	
	latest	
Investment grade	118	136
High-yield	357	429

Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.

Commodities

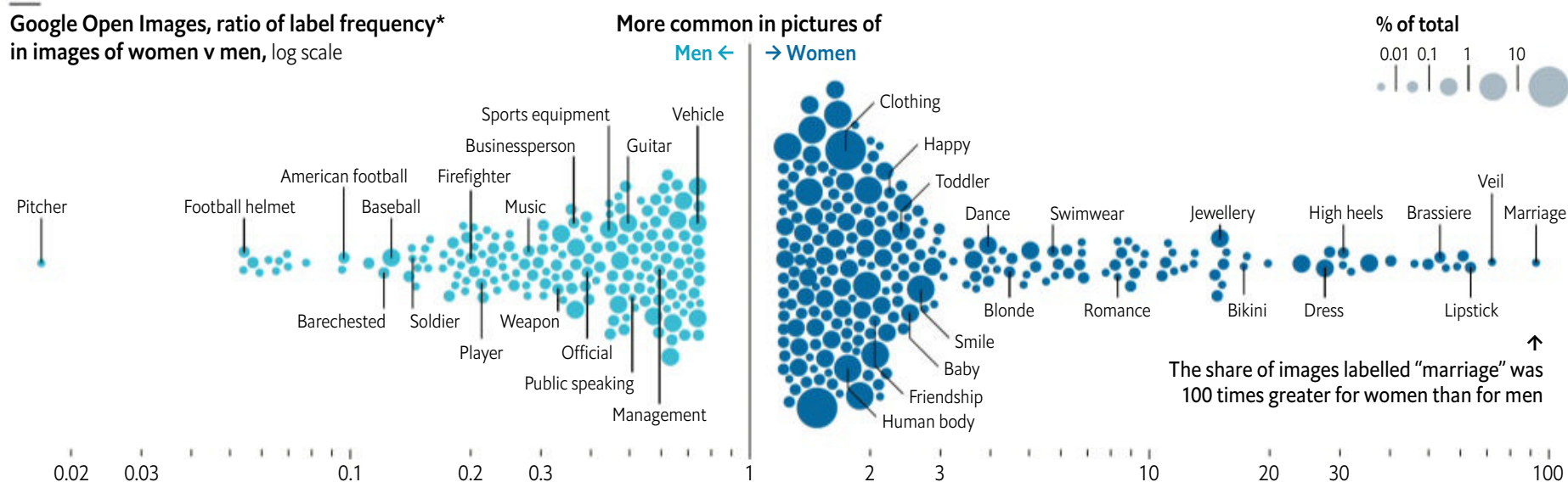
The Economist commodity-price index				
2015=100	May 25th	Jun 1st*	% change on	
			month	year
Dollar Index				
All items	181.7	188.8	2.1	73.4
Food	134.5	138.2	-2.1	49.6
Industrials				
All	225.7	236.1	4.6	89.8
Non-food agriculturals	171.9	165.8	-7.7	88.9
Metals	241.7	256.9	7.4	90.0
Sterling Index				
All items	196.2	203.4	0.1	53.6
Euro Index				
All items	164.6	171.0	0.4	58.3
Gold				
\$ per oz	1,892.0	1,898.7	6.8	9.1
Brent				
\$ per barrel	68.7	70.4	2.0	77.3

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

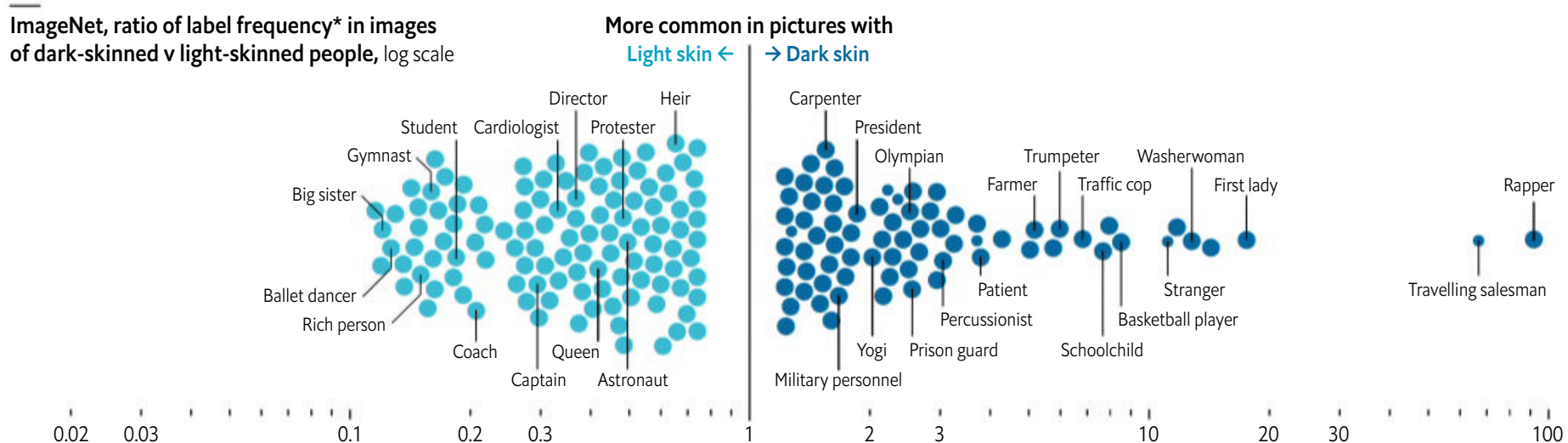
For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

→ Image databases used to train facial-recognition programs reflect pervasive stereotypes

Google Open Images, ratio of label frequency* in images of women v men, log scale



ImageNet, ratio of label frequency* in images of dark-skinned v light-skinned people, log scale



*Excluding labels used on <0.05% of images, or with sex/skin-colour imbalance below 20% Sources: ImageNet; Google Open Images; IPUMS

Bias in, bias out

Fixing demographic skews in training data would make models more fair

ALGORITHMIC BIAS is often described as a thorny technical problem. Machine-learning models can respond to almost any pattern—including ones that reflect discrimination. Their designers can explicitly prevent such tools from consuming certain types of information, such as race or sex. Nonetheless, the use of related variables, like someone's address, can still cause models to perpetuate disadvantage.

Ironing out all traces of bias is a daunting task. Yet despite the growing attention paid to this problem, some of the lowest-hanging fruit remains unpicked.

Every good model relies on training data that reflect what it seeks to predict. This can sometimes be a full population, such as everyone convicted of a given crime. But modellers often have to settle for non-random samples. For uses like facial recognition, models need enough cases from each demographic group to learn how to identify members accurately. And when making

forecasts, like trying to predict successful hires from recorded job interviews, the proportions of each group in training data should resemble those in the population.

Many businesses compile private training data. However, the two largest public image archives, Google Open Images and ImageNet—which together have 725,000 pictures labelled by sex, and 27,000 that also record skin colour—are far from representative. In these collections, drawn from search engines and image-hosting sites, just 30-40% of photos are of women. Only 5% of skin colours are listed as "dark".

Sex and race also sharply affect how people are depicted. Men are unusually

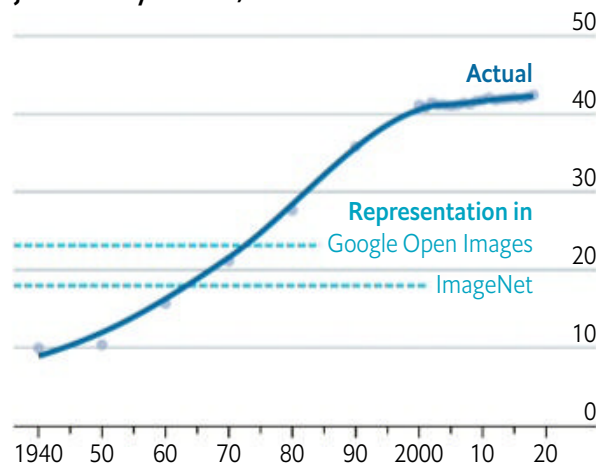
likely to appear as skilled workers, whereas images of women disproportionately contain swimwear or undergarments. Machine-learning models regurgitate such patterns. One study trained an image-generation algorithm on ImageNet, and found that it completed pictures of young women's faces with low-cut tops or bikinis.

Similarly, images with light skin often displayed professionals, such as cardiologists. Those with dark skin had higher shares of rappers, lower-class jobs like "washerwoman" and even generic "strangers". Thanks to the Obamas, "president" and "first lady" were also overrepresented.

ImageNet is developing a tool to rebalance the demography of its photos. And private firms may use less biased archives. However, commercial products do show signs of skewed data. One study of three programs that identify sex in photos found far more errors for dark-skinned women than for light-skinned men.

Making image or video data more representative would not fix imbalances that reflect real-world gaps, such as the high number of dark-skinned basketball players. But for people trying to clear passport control, avoid police stops based on security cameras or break into industries run by white men, correcting exaggerated demographic disparities would surely help. ■

United States, share of professional jobs held by women, %





The colours of dawn

Josep Almudéver Mateu, the last known member of the International Brigades, died on May 23rd, aged 101

OLD SOLDIERS often lose their enthusiasm for fighting. They speak instead of peace and, in fading voices, warn the young against the folly of war. Not so Josep Almudéver. At the drop of a hat he would unfurl the Spanish Republican flag he always carried with him, yellow, red and purple, the colours of dawn, and drape it proudly round his shoulders. He would rather forget to eat, than forget that flag. Then he would raise his clenched fist, shout “Viva el socialismo!” in a voice still carrying and clear, and break into a Republican song. No stopping him.

He was still at heart the boy of 17 who tried all the recruitment offices round his village, Alcàsser in the province of Valencia, to enlist in the fight to save the Second Republic from Francisco Franco’s fascists. The moment Franco’s coup against the elected government ignited the civil war, in July 1936, he had to join up. He was too young, but “You won’t stop him marching,” his father told the secretary at the Socialist Party office, who then obligingly accepted his age as 19. He was still 17, on the bleak, freezing front line at Teruel in Aragon where the Republican forces were trying to dislodge Franco’s troops, when shrapnel ploughed into his chest and shoulder. But it didn’t hurt for long and, after some weeks, he was looking for a front line again.

After the defeat at Teruel, where the airpower of Nazi Germany came to Franco’s aid, many Republicans lost stomach for the fight. He was all the keener. His youth was still a problem, though—unless he enlisted as a foreigner. Luckily he was both French and Spanish, born in Marseille when his *valenciano* father was looking for work there. So in May 1938, flaunting his French side, he joined the International Brigades. He was now part of a force of some 40,000 fighters who had flocked to Spain to save the world from fascism, by saving the Republic first. They came from all over Europe, Asia and America, and in every left-wing colour: socialists, communists, anarchists and Trotskyists, with a fringe of writers,

drifters and romantics. It was like being on a medieval crusade, but with rifles and artillery (when it turned up) and a role as shock troops, helping as needed. The Brigades were his ideal of what the Left could be, like the Popular Front forged from Spain’s warring parties in 1936: all factions uniting to bring down capitalism and raise up the working class.

His brigade, 129, was the latest to be formed and, as it turned out, the last. The fighters were fresh, even scoring small victories in the general Republican retreat. Huge previous losses meant that most *brigadistas* by then were Spaniards, but his own division had a Dutchman, a German, a Swiss, an American (their chief mechanic), even a Chinaman. His regular comrade, David, was Canadian. They could barely talk to each other, but got on fine. There were no conflicts. Others reported plenty of strife in the Brigades, as well as the overpowering camp smell of rotting oats and urine, the same old bean stew eaten out of dirty tins, and the tedium of weeks spent waiting for orders from their Republican commanders. He did not even mind the waiting much.

Besides, as he kept stressing, the Republic did not lose the war. It was betrayed by the non-intervention pact signed by the major Western powers in 1936, pledging to keep out of the struggle. When he had marched away from Alcàsser on that shining September morning, the people cheering mightily, he carried an antiquated rifle and no bullets, because the French now refused to send the munitions which Spain had ordered and paid for. Fascist Italy and Germany, however, ignored the pact and piled in on Franco’s side, as at Teruel. *Pobre República*, poor Republic, he sighed. Against criminals like those, it hadn’t stood a chance. As for the idea that Spain’s was a “civil war”, how stupid that was. It was a world war fought on one small, bloody stage.

Everything might have been different. When the Republic was first declared in 1931, he saw freedom explode in the streets. The new government brought in secular schools and votes for women, but Catholic opponents gave the poor food and bedsheets, and votes slipped away. He began to read newspapers to the local peasants, two-thirds of them illiterate, explaining that socialism would build a better world. He still believed it would when, in October 1938, the Republican government doomed itself by telling all its foreign fighters to go home. It was hoping for the same gesture from Franco, with his thousands of Germans and Italians and Moroccans, but those did not leave. *Pobre República*.

He did not go to France, as he could have done. Instead he lingered unhappily in Valencia, and was arrested. He was sent for several months to the Albalat concentration camp, where he was made to watch the executions of Republican fighters as young as himself. Their screams still haunted him and filled his eyes with tears. After more months in an ordinary prison he was released, but went on fighting as a *maqui* in the north-east until, in 1947, he fled into definitive exile at Pamiers, near Toulouse. He had a young family now, and could not keep taking risks. He settled to his father’s trade of building and bricklaying.

Nothing, however, dulled his passionate interest in the progress or non-progress of the Left. Its divisions continued to frustrate him, both in France and in Spain, to which he was not allowed to return until 1965. Why was it so hard for the Socialists and Podemos to unite for the good of the workers? Because they were still in thrall to capitalists, as the Second Republic, too, had turned out to be. The rich always ended up winning, he would say, scornfully rubbing his fingertips together. Money ruled. The king, “Colonel” Juan Carlos as he called him, had sent him a million pesetas for enduring prison, but he wouldn’t touch it. He didn’t want it.

Instead, in his flat in Pamiers, his riches lay around him: posters, scarves, medals and plaques glowing with yellow, red and purple. Che Guevara’s face was on the wall, and beside it his own young face, with the same rapt expression of waiting for the great socialist dawn. If Spain still needed him, he would take up arms. And on foot, ancient but agile, he would cross the Pyrenees. ■

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We all need it

and it's a source of progress.

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facing the climate challenge,

we are moving forward, together,

towards new energies.

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and this energy journey is ours.

Our ambition is to be a world-class player

in the energy transition.

That is why

**Total is transforming and
becoming TotalEnergies.**



TotalEnergies